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(28-29 August, Almaty, Kazakhstan)

IMPROVING TRADE AND DEVELOPMENT PROSPECTS OF LANDLOCKED AND TRANSIT DEVELOPING COUNTRIES

Contribution by the
Division of International Trade in Goods and Services, and Commodities

Report by the UNCTAD Secretariat

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INTRODUCTION: LLDCs AND EXPORT COMPETITIVENESS

1. Landlocked developing countries (LLDCs) experience unique difficulties in their trade and development process as a consequence of their lack of direct access to sea transportation and their isolation and remoteness from major world markets. In most of the economic literature, the correlation between distance and transport costs has been proved.[1] High transport costs hamper the competitiveness of LLDCs and limit their trade volume. LLDCs' exports (and imports) also generate additional costs in the country or the countries of transit, for example customs fees, charges for use of transit infrastructure such as roads and harbours, and stocking of merchandises. These costs are augmented in situations of inadequate and/or dilapidated infrastructure (transport, telecommunications, electricity). This negative trade effect is stronger when the use of transport is more intensive, as in the case of bulky traded goods and sectors dependent on imported materials or intermediate goods as inputs to the production process. Most LLDCs are exporters of bulk commodities whose shipping costs are high.

2. International trade for LLDCs involves transportation primarily by both maritime and inland transport, the latter (such as rail and road) being by far the most expensive. A comparison between ocean freight charges paid for containerized imports and inland transit costs shows the relative importance of the latter. The difference is quite significant, with land factors of between one and four times those of ocean freight costs; this suggests that any attempt to reduce the transport costs of exports and imports of LLDCs would primarily have to aim at reducing the level of costs related to inland transit operations. For LLDCs that have long inland transport routes – for example, Afghanistan, Burundi, Chad, Niger, Rwanda, Zambia and Zimbabwe, with distances of over 2,000 km. to the nearest coast. - and where some of the transit countries also have low-quality infrastructure, the cost burden may become prohibitive for trade in low-value bulky commodities.

3. The inefficiency of transport services limits the flexibility of LLDCs to respond to sudden changes in the demand for their exports (export-demand shocks), arising for example from crop failures in neighbouring countries. Exporters from LLDCs often miss such opportunities because of the lack of transport capacity to carry additional export loads. Moreover, these exporters may face difficulties in delivering goods on time, and this undermines their competitiveness. Exporters can earn better prices on contracts which specify "prompt shipment", while prices may be discounted if delivery is delayed. "Just-in time delivery" applies not only to manufactured goods, but also to commodities, particularly those that experience a degree of processing before being exported and are sold as inputs to manufacturing industries.

4. This report, a contribution to the International Ministerial Meeting of Landlocked and Transit Developing Countries and International Financial and Development Institutions on Transit Cooperation, examines key aspects of competitiveness of LLDCs and transit developing countries affecting the contribution of international trade to their development prospects. Chapter I reviews trade structure and transport costs issues. The special case of commodities trade is assessed in Chapter II. National and international policies and measures to enhance fuller participation of LLDCs and transit developing countries in international trade are examined in Chapter III.

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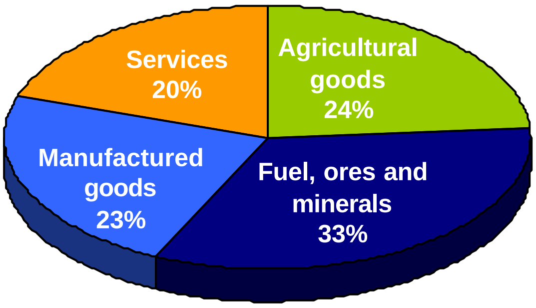
[1] See, for example N. Limão and A. Venables, "Infrastructure, Geographical Disadvantage and Transport Costs", Working Paper. International Economics, Trade, Capital Flows, (1999).

CHAPTER I
ISSUES REGARDING TRADE STRUCTURE AND TRANSPORT COSTS

5. Nearly 70 per cent of aggregate exports from the 30 LLDCs are composed of mineral and agricultural commodities and tourism services (see figure 1). The large majority of LLDCs specialize in agriculture and mineral products for exports, and only a few in manufactures (see table 1).

Figure 1. Aggregate LLDC Structure of Exports (2001)



Aggregate LLDC Structure of Exports (2001)

Table 1. LLDC classification by primary export sector

Agriculture	Mineral resources	Manufactures
Afghanistan	Armenia	Lao PDR
Bhutan	Azerbaijan	Lesotho
Burkina Faso	Bolivia	Nepal
Burundi	Botswana	FYR Macedonia
Chad	Central African Republic	Zimbabwe
Ethiopia	Kazakhstan	
Kyrgyzstan	Mongolia	
Malawi	Niger	
Mali	Turkmenistan	
Paraguay	Zambia	
Rwanda		
Swaziland		
Tajikistan		
Uganda		
Uzbekistan		

6. Moreover, commodities are of prime importance to LLDCs as a source of external revenue, income and employment. Of the 30 LLDCs, only seven have a commodity export revenue share of less than 50 per cent. At the regional level, in the past two decades commodity dependence among LLDCs has remained very high on average. As can be seen in table 2, on average[2] the commodity dependency ratio – measured as commodity exports as a share of total merchandise exports in value - moved from 88.26 per cent in 1975-1980 to 66.4 per cent in 1996-2000. If one excludes Botswana, this ratio reaches 70.4 per cent for the rest of LLDCs. Among Latin American countries, commodity dependence moved from 92.8 per cent in 1975-1980 to 78.2 per

[2] Medians were used since weighted averages could not be computed, and in order to avoid errors in extreme values.

cent in 1996-2000, whereas for Central Asian countries and the Former Yugoslav Republic of Macedonia the ratio remained on average at around 64 per cent between 1995 and 2000. In all, commodity dependence remained high for all but three LLDCs, namely Botswana, the Lao People's Democratic Republic and Nepal, which experienced a reduction in that ratio of at least 50 percentage points over two decades. Also, only two of the LLDCs have the advantage of being oil-producing.

Table 2. Landlocked developing countries and commodity dependence (1980-1997)

Countries	**Commodities as % of merchandise exports**		**Leading export goods**
	1975-1980	1996-2000	
Africa			
Botswana	61.6	12.0	Diamonds, vehicles, cooper, nickel, meat
Burkina Faso	96.0	61.0	Cotton
Burundi	98.2	94.4	Coffee, tea
Central African Republic	76.4	56.8	Wood, live animals, cotton
Chad	91.5	54.5	Cotton, meat
Ethiopia	99.8	89.9	Coffee
Malawi	88.4	81.3	Tobacco, tea, sugar
Mali	78.6	50.2	Cotton, gold
Niger	94.0	77.0	Uranium, livestock
Rwanda	97.5	77.4	Coffee, tea, tin ore
Swaziland	83.8	46.7	Sugar concentrates, sugar, wood pulp
Uganda	93.6	89.3	Coffee, cotton
Zambia	98.9	70.4	Copper, zinc
Zimbabwe	77.4	62.4	Tobacco, gold, iron, textiles
Region's median	***92.6***	***66.4***	
Asia			
Lao PDR	56.0	18.3	Wood, live animals, coffee
Mongolia	79.6	88.1	Copper ore, live animals, wool
Nepal	94.5	17.5	Textiles, leather, jute
Region's median	***67.8***	***53.2***	
Latin America & the Caribbean region			
Bolivia	98.9	78.2	Metals, natural gas, soybeans
Paraguay	86.7	82.8	Cotton, soybeans
Region's median	***92.8***	***78.2***	
Europe & Central Asia 1995 2000			
Armenia	21.4	23.6	Gold, aluminium
Azerbaijan	65.2	88.5	Oil and gas, cotton
FYR Macedonia	39.3	39.2	Iron, steel.
Kazakhstan	64.2	74.5	Oil, metals, grains, coal
Turkmenistan	98.3	87.0	Oil, nat. gas, cotton
Uzbekistan	62.6	54.3	Cotton, gold
Region's median	***63.4***	***64.4***	

Source: UNCTAD calculations.

7. The dependence on commodities for export revenue is heightened by the concentration of exports of all LLDCs on a range of fewer than five commodities. In Africa, seven out of 11 LLDCs depend on only a couple of commodities for more than half of their export revenues. This limited specialization renders LLDCs highly vulnerable to changes in international prices for commodities. Such vulnerability is also evident from the combined commodities average

monthly index, which had also fallen by more than one half from a level of 147 in 1980 to 70 by 1999.[3]

8. A characteristic of LLDCs is that they are not only mostly commodity-dependent but also exhibit a lower trade openness (export to GDP ratios in annex table 3; see also figure 2) as compared with non-landlocked countries. Moreover, an analysis of the West African Monetary and Economic Union (UEMOA) regional trade[4] which has been involved in an integration process since independence in the early 1960s suggests that coastal countries are the main exporters and well endowed in transportation infrastructures, while landlocked countries are the main importers with a relatively low level of paved roads, and serve as a periphery to the former. Only three LLDCs have been able to diversify over the past two decades. Botswana has in the meantime increased its share of diamonds; Swaziland has engaged in processing sugar into soft drink concentrates; and Nepal has started exporting textiles.

9. In respect of the destination of trade, LLDCs' regional trade can be significant. Table 4 shows the proportion of total exports and imports whose destination or source are countries of the same region or continent. Regional trade is very significant for Afghanistan, the Lao People's Democratic Republic, Nepal, Paraguay and Tajikistan, and important for all other LLDCs. It could be expected that a large proportion of such trade would incur lower average transport costs given the shorter distances usually involved. However sometimes intraregional transport links are sparse and there is differing efficiency of the transit transport systems, offsetting the apparent advantage of proximity and increasing costs.

Table 3. Intraregional trade of landlocked developing countries for 1998 and 1999: proportion of total exports and imports whose destination or source are countries of the same region or continent.

	List of landlocked developing countries		EXPORTS		IMPORTS	
			1998	1999	1998	1999
1	Afghanistan		36	54.9	56.1	55.8
2	Armenia		33.8	24.5	26.1	25.5
3	Azerbaijan	**	48.8	22.7	40	32.6
4	Bhutan	**				
5	Bolivia	*	44.4	37.7	35.1	46.4
6	Botswana	*				
7	Burkina Faso	*	8.4	13.8	27.7	30.6
8	Burundi	*	2.8	2	17.6	19.7
9	Central African Republic	*	2.3	2	17.2	17.9
10	Chad	*	5.1	6	31.8	34.3
11	Ethiopia	**	9.2	14.5	2.7	2.4
12	Kazakhstan	**	17.2	27	14.6	24.7
13	Kyrgyzstan	*	33	34	44.1	41.4
14	Lao People's Democratic Rep.	**	5.8	21.5	84.9	86.9
15	Lesotho	*				
16	Malawi	*	9.3	5.4	21.6	21.7
17	Mali	*	8.4	8.1	23.9	24.2
18	Mongolia	*	40.9	53.9	27.1	35.9
19	Nepal	**	36.5	31.4	79.4	73.7
20	Niger	*	31.9	32.8	28.3	33.2

[3]UNCTAD, Annual average monthly indices of free market prices in constant dollars, 1985 = 100, in Monthly Commodity Price Supplement 1960-1999, p. 41.
[4] S. Coulibaly and L. Fontagne, South-South trade: Geography matters, mimeo.

21	Paraguay	*	63.6	65.9	52.4	54.6
22	Rwanda	*	2.2	4.1	24.2	24.9
23	Swaziland	*				
24	Tajikistan	**	30	32.2	48.3	60.8
25	The Former Yugoslav Rep. of Macedonia	**	8.8	8.6	11.5	12.7
26	Turkmenistan		59.2	23.7	47.7	46.1
27	Uganda	*	2.3	2.2	38.5	41.5
28	Uzbekistan	**	40.9	45.9	38.4	40.4
29	Zambia	*	13.2	14.4	17.2	12.5
30	Zimbabwe	*	21.7	18.2	5.6	5.7

* Countries members of the WTO.

** Countries observers at the WTO.

Source: "Transit Systems of Landlocked and Transit Developing Countries: Recent Developments and Proposals for Future Action", UNCTAD, 13 June 2001.

10. LLDCs' trade structure weighs heavily in their trade costs. *Ad valorem* transit costs (see table 5), covering freight and insurance costs for exports, are highest among LLDCs (14.1 per cent) relative to other developing countries (8.6 per cent) and developed countries (4.5 per cent), owing to high transit costs and risks associated with the LLDC exports. Such transit costs vary considerably among LLDCs from under 5 per cent for Nepal and Swaziland to over 50 per cent for Chad and Malawi.

Table 4. Costs of transportation/freight and insurance of traded goods in 1995

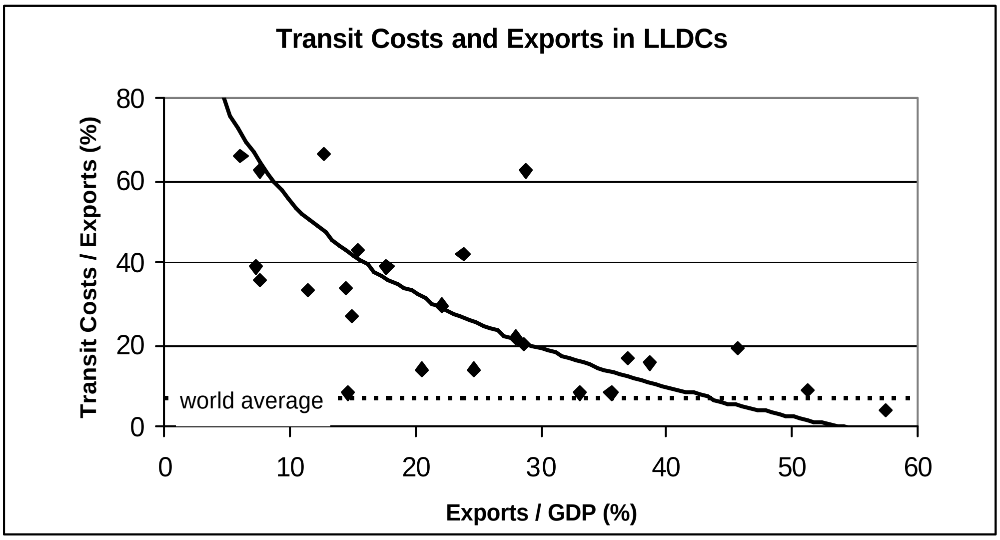
Country group	As a percentage of total export values	As a percentage of c.i.f. import values
Landlocked countries	14.1	10.7
Least developed countries	17.2	12.5
Developing countries	8.6	7.4
Developed market economy countries	4.5	3.5

Source: UNCTAD calculations based on IMF Balance of Payments Statistics 2000 (CD-ROM).

11. Economic data for LLDCs show a negative correlation between transit costs and exports; as transit costs rise, exports' share in gross domestic product (GDP) falls (see figure 2). This suggests that high transit costs may significantly reduce the potential for export-led economic growth in LLDCs. Thus, high transit costs can act to keep LLDCs in a low-level equilibrium income trap by preventing these countries from achieving higher income levels,[5] particularly given the substantial reductions in potential gains from trade that necessarily result from transit costs (for both imports and exports) that are appreciably higher than the world average transit-cost / (goods)-export ratio which was 7.3 percent in 1998.

[5] Only five of the 30 LLDCs have per capita incomes exceeding US$ 1,000.

Figure 2. Transit costs and exports in LLDCs



Source: UNCTAD calculations based on IMF Balance of Payments Statistics 2002 and UNCTAD Statistical Handbook 2002. The graph has been calculated using each LLDC's most recently reported annual transit costs (transportation and insurance payments incurred for all goods exports) and the corresponding value of goods exports and GDP in that year.[6]

12. Nearly all LLDCs have low GDP per capital, while coastal economies generally have a relatively higher GDP per capita income.[7] Developing countries with coastal proximity have a clear advantage in establishing competitive manufacturing export sectors, which in turn has been an important contributor to overall economic growth.[8] In Africa LLDCs export to GDP ratio is half of what it is in coastal African countries. However, there is so far relatively little data relating to how transport costs differ across countries, or how much such differences in costs relate to deficient infrastructure or high pricing for its use (e.g. inefficient port management, poor road maintenance and/or high transit and port charges), anti-competitive pricing by firms (e.g. high pricing by shipping cartels) or physical geography (e.g. inland versus coastal versus oceanic trade). There is need to address such analytical deficit for appropriate policy initiatives and domestic and international measures to be developed to assist LLDCs address the roost of higher than average trade costs. One analysis[9] of the West African Monetary and Economic Union (UEMOA) showed that coastal member States were the main exporters and were well endowed transportation infrastructures, while landlocked countries were the main importers with relatively low level of paved roads and served as a periphery to the former.

13. LLDCs are also negatively affected by the high cost of their imports. A rough measure of the transit cost disadvantages faced by LLDCs is provided by balance-of-payments statistics that show freight costs as a proportion of landed cost of imports. In 1995, freight costs were

[6] 2000: Armenia, Azerbaijan, Bolivia, Burundi, Ethiopia, FYR Macedonia, Kazakhstan, Kyrgyzstan, Lao PDR, Lesotho, Mongolia, Nepal, Paraguay, Rwanda, Swaziland, Uganda, Zambia; 1999: Botswana; 1997: Mali, Turkmenistan; 1995: Niger; 1994: Burkina Faso, Central African Republic, Chad, Malawi, Zimbabwe; No available data: Afghanistan, Bhutan, Tajikistan, Uzbekistan.

[7] See J. L. Gallup, A. Mellinger and J. D. Sachs, Geography and Economic Development, Working Paper No. 1, Center for International Development at Harvard University, 1999.

[8] See S. Radelet and J. D. Sachs, Shipping costs, manufactured exports and economic growth, paper presented at the American Economics Association annual meeting, 1998.

[9] S. Coulibaly and L. Fontagne, South-South trade: Geography matters, mimeo.

approximately 3.5 per cent of the c.i.f. import values for developed countries, whereas they were about three times this percentage for LLDCs (table 6). For LLDCs in West Africa they were approximately 24.6 per cent; in East Africa, 16.7 per cent; and in Latin America, 14.6 percent. The freight costs of the sample of landlocked countries exceeded the freight costs of all countries in their respective continents by between 6 and 11 percentage points.

Table 5. Freight and insurance as a percentage of cost, insurance and freight import values for selected groups of countries[10]

	1985	1990	1995	1997
World total	4.6	5.5	4.4	4.1
Developed market economy countries	3.8	4.2	3.5	3.4
Developing countries total: of which:	7.7	11.2	7.4	6.5
Africa	11.3	10.6	11.3	10.0
America	6.7	12.8	6.4	5.6
Asia	7.7	11.2	7.4	6.5
Landlocked developing countries: of which:	14.8	15.8	10.7	..
East Africa [a]	17.9	20.2	16.7	14.6
Southern Africa [b]	12.5	11.5	9.9	..
West Africa [c]	30.0	30.2	24.6	..
Latin America [d]	16.4	18.5	14.6	11.4
Europe [e]	-	-	-	8.3
Other Asia [f]	3.3	9.3	8.1	4.2
CIS countries [g]	-	-	6.0	9.6
Least developed countries	13.8	14.6	12.5	-

[a] Burundi, Ethiopia, Rwanda and Uganda.
[b] Botswana, Lesotho, Malawi, Swaziland, Zambia and Zimbabwe.
[c] Burkina Faso, Central African Republic, Chad, Mali and Niger.
[d] Bolivia and Paraguay.
[e] The Former Yugoslavia Republic of Macedonia.
[f] Lao People's Democratic Republic, Mongolia and Nepal.
[g] Armenia, Azerbaijan, Kazakhstan, Kyrgyzstan and Turkmenistan.

Source: "Transit Systems of Landlocked and Transit Developing Countries: Recent Developments and Proposals for Future Action", UNCTAD, 13 June 2001.

14. The high transport costs of LLDCs' imports inflate the prices not only of consumer goods but also of capital goods and intermediate inputs such as fuel, thereby increasing the cost of domestic agricultural and industrial production (as does import protection unless duty drawback or waiver schemes are in operation). Thus a significant reduction in the transport cost of their imports would increase their purchasing power and boost their domestic production, underpinning their diversification efforts and increasing the competitiveness of their exports.

15. When the determinants of transport costs for LLDCs are compared with those for coastal countries, it is found that the median landlocked country tends to incur transport costs which are 50 per cent higher than those for the median coastal country, and to have trade volumes that are 60 per cent lower.[11] Notably, high transport costs faced by LLDCs have become for them far

[10] Data not available for Afghanistan, Bhutan, Tajikistan or Uzbekistan.

[11] N. Limão and A. Venables, "Infrastructure, Geographical Disadvantage and Transport Costs", Working Paper. International Economics, Trade, Capital Flows", (1999).

more restrictive barriers to trade than tariffs in major markets. For instance, tariffs in Canada, the European Union, Japan and the United States vary from averages of 3 to 7 per cent on goods originating in most LLDCs. In contrast, transport costs paid by LLDCs are on average almost three times higher than these average tariffs.

16. In the African cases, the 1992 French/West African shipowners case involved liner conferences and shipowners' committees formed as a result of agreements between public enterprises of 11 African States[12] and French shipping companies, which had agreed to allocate freight among their members, share information on traffic between France and the countries concerned, and promote the maintenance of regulatory entry barriers to shipowners wishing to operate outside this cartel. The 1993 CEWAL Liner Conference case concerning transport between European ports and Democratic Republic of Congo, related to the granting of exclusive shipping rights to the CEWAL by the Congo authorities, and predatory pricing to keep out competitors and loyalty rebates. Enforcement action in both cases by the European Commission against the European firms involved led to the dissolution of the liner conferences and shipowners' committees, and greater market concentration.

17. There was also a substantial reduction in charges on the maritime segment of transport routes (around 10-15 per cent for coastal countries such as Cameroon, Benin, Côte d'Ivoire, Gabon, Senegal and Togo), even though such reductions were not as marked as on the transatlantic and the Europe-Asia route. The liberalization by those countries of their regulatory entry barriers in these sectors also contributed to the price reductions; other countries that did not liberalize achieved smaller reductions. However, despite such decreases in costs purely related to shipping, the overall cost of transport between West and Central Africa and Europe did not substantially decrease, because of problems of economies of scale, poor equipment or service in ports, poor land communications with the hinterland and monopolies over cargo handling. Nor is it clear that the decreases in shipping costs were maintained over the long term, given the trends in market concentration.

18. With regard to commodities, most commodities are traded in bulk and have a lower unit value than manufactured goods, and agricultural commodities require special care during transport such as temperature, moisture and phytosanitary control and appropriate packaging. For these reasons, the problem of transport is acute for LLDCs. Also, as discussed earlier, LLDCs face a very large cost disadvantage vis-à-vis the coastal countries as a result of high transport costs.

19. Studies analysing the impact of geography on development have found that "Africa has the highest proportion"[13] of landlocked population of all regions. They must pay high costs of overland transport to their nearest ports, which are also "increased due to bureaucratic and political costs of crossing at least one additional international border". For exports table 7 shows that on average African LLDCs, which are all commodity-dependent - as compared with the nearest transit countries - face excess costs ranging from 33 to 35 per cent in West Africa (Mali and Burkina Faso) to as high as 206 per cent in East Africa (Burundi). Looking at the CIF-FOB band,[14] the average percentage shipping costs mark-ups between 1965 and 1990 were 41.7 per cent in Mali, 40.6 per cent in Rwanda and 33.6 per cent in Chad. Their coastal comparators

[12] Benin, Burkina Faso, Cameroon, Central African Republic, Congo, Gabon, Guinea, Mali, Niger, Senegal and Togo

[13] J.Finkelstein and R. Langhammer, "Is geography destiny?" *International Economic Relations and Development Economics Seminar*, 19 June 2000, pp. 3-6.

[14] The ratio of extra CIF cost with respect to FOB costs: (CIF/FOB)-1.

scored better with 15.3 per cent in Kenya, 7.8 per cent in Ghana, 9.7 per cent in Cameroon, 4.5 per cent in Mexico and 11.8 per cent in Bangladesh. In fact, badly maintained roads and poorly policed highways constitute risks, which add heavy insurance costs on top of basic shipment costs. While air might be a possible transport mode alternative for LLDCs, African LLDCs tend to face higher airfreight fares to Europe. For instance, while Zambia and Zimbabwe are faced with airfreight fares of up to US$ 2 per Kilo for their horticultural products exports to Europe, South African and Kenyan exporters have to pay US$ 1.8 per Kilo for the same destination.[15]

Table 6. Transport costs, coastal and landlocked countries in Africa[16]
Based on export shipments in 1995, US$ 20-foot equivalent

			Destination			
Coastal country	**Inland route**	**Landlocked country (LLDC)**	**Northern Europe**	**Japan**	**North America**	**Average LLDC excess cost**
Senegal	-	-	1610	4100	n.a.	
	Via Senegal	Mali	2380 (+47.8%)	4870 (+18.7%)	n.a.	+33.3%
Ghana	-	-	1815	3025	2460	
	Via Ghana	Burkina Faso	2615 (44.1%)	3835 (+26.8%)	3260 (+32.5)	+35.5%
Cameroon	-	-	1520	n.a.	n.a.	-
	Via Cameroon	Central Afr. Republic	2560 (+68.4%)	n.a.	n.a.	+68.4%
United Republic of Tanzania	-	-	1380	1350	2000	-
	Via U.R. of Tanzania	Rwanda	3880 (+181%)	3850 (+185.2%)	4500 (+125%)	+163.8%
	Via U.R. of Tanzania	Burundi	4530 (228.3%)	4500 (+233.3%)	5150 (+157.5)	+206.5%
	Via U.R. of Tanzania	Zambia	3250 (135.5%)	3220 (+138.5%)	3870 (+93.5%)	+122.5

Source: UNCTAD calculations using data from J.Finkelstein and Langhammer[17].

20. Analysing the imports cost structure in six geographical clusters for the 1980-1995 periods, Mackellar et al.[18] looked at the share of freight charges as a percentage of the value of imported merchandise. For West Africa they averaged 26.0 per cent of the CIF merchandise imports value in five LLDCs (Chad, Burkina Faso, Mali, Niger and Central African Republic) as opposed to five regional transit countries (Guinea, Côte d'Ivoire, Ghana, Togo and Nigeria). In five southern African LLDCs, freight charges represented 19.1 per cent of FOB imports against an average of

[15] S. Heri, The Growth and Development of the Horticultural Sector in Zimbabwe, a consultant report prepared for UNCTAD workshops on African Horticulture Diversification sector in Africa, Bamako, February 2001, Nairobi, May 2001.
[16] Stephen and Sachs, Cited by J.Finkelstein and R. Langhammer, "Is geography destiny?" *International Economic Relations and Development Economics Seminar*, 19 June 2000, p. 3.
[17] J.Finkelstein and R. Langhammer, "Is geography destiny?" *International Economic Relations and Development Economics Seminar*, 19 June 2000.
[18] L. Mackellar, A. Worgotter and J. Worz Economic Development Problems of Landlocked Countries,. Transition Economies Series No. 14 , J Institute for Advanced economies, Vienna , January 2000, p.7.

10.0 per cent in the four regional transit countries (Mozambique, Namibia, South Africa and United Republic of Tanzania).

21. Analysis of the transit cost structure of LLDCs can shed light on the causes of their observed disadvantage. In Mali, total economic costs of transit to the country represent about 5 per cent of GDP, whereas payments to other countries represent 50 per cent of total direct costs. It appears that land transit and transit delays have an extremely high share of the total non-factor costs. As an illustration, the cost structure of imports from Europe to Mali is reflected in table 8, showing the preponderance of land transit costs and delays.

Table 7. Import cost structure from Europe to Mali

Cost items	% Share in total import cost
Land transit	30-33
Port charges	6-9
Delays in transit	29-45

Source: UNCTAD, consultancy report by C. de Castro, Trade and Transport Logistic Study: Agricultural Commodities, UNCTAD, March 2003.

Box 1. Uganda: The burden of being landlocked

Transport costs can be looked at as taxes. In the case of imports, transports costs have a far greater impact – protection in economic terms - than do tariffs. The excess costs of trade due to remote location and/or inefficient transport networks where equivalent to an average tax of 48 per cent in 1994 against an effective protection rate of 38 per cent due to trade policy. Implicit export tax-cum-transport costs reached 100 per cent for manufactured foods, almost 40 per cent for food products, almost 25 per cent for coffee, cotton and tea, and about 20 per cent for fish. One reason transport costs are often inordinately high, in many cases representing a higher cost to exporters than trade policy, is that Uganda is landlocked and far from the sea ports through which most goods pass. This is exacerbated by the poor quality of roads and rail networks and long delays at customs and ports.

Source: Olivier Morisset, *Insights*, No. 33, June 2000.

22. The special case of commodities transit costs can be further illustrated by some case studies of freight costs experienced by LLDCs as compared with transit countries exporting similar commodities. As illustrated in table 9, when LLDCS' commodities transit costs as a share of final costs at European ports (in the range of 10.81-82.10 per cent) are benchmarked, it is seen that they are much lower than gross estimates of transit costs for the world (3.3 per cent) and developing countries (5.4 per cent). One striking fact is that the incidence of freight costs in the value at destination of the commodities is distorted by the high cost of containers. This explains the difference between the extremely high incidences of transit costs of unprocessed but containerized hides from Rwanda (52.08 per cent), and the unprocessed bulk transport (without container) of hides from Kazakhstan (6.20 per cent). Rwanda's situation is a consequence of the extremely high cost containerization for landlocked countries, and furthermore the need for containerisation due to hazardous rail transit to Mombasa (Kenya) or Dar-es-Salaam (United Republic of Tanzania). Therefore, to ensure that a commodity is competitive an export decision

on the means of packing, routing or mode of transport has to be matched by the desirable value of the product at destination markets. The figures above show that:

a) Burkina Faso has the highest cost and incidence of transit cost for mangoes, and the cheapest semi-processed cost for hides but a penalizing high transit cost, and is less competitive for cotton than Kazakhstan;
b) Kazakhstan is fully competitive for raw hides and cotton, both in product price and in transit costs; and
c) Nepal is competitive in product price for garments but at a penalizing transit cost.

Table 8. Commodities transit costs compared

	Burkina Faso	**Pakistan**	**Rwanda**	**Kazakhstan**	**Nepal**
Mangoes: $/kg	1.04	0.82	_	_	_
% CIF cost	82.10	78.38			
Hides and skins:	s-pr.	Pr./cnt	Unpr./cnt	Unpr./non-cnt	
$/kg	6.7	10.15	3.6	2.80	
% CIF cost	16.50	5.51	52.08	6.20	
***Cotton bales:* $/kg**	1.26	_	_	1.20	
% CIF cost	25.00			12.00	
Garments:					Packaged & ctn
$/kg	_	12.09	_		6.90
% CIF cost		8.54			10.81

Source: see table 8.
Pr: processed; s-pr.: semi-processed; unpr: unprocessed; cnt: container; non-cont.: uncontainerized.

23. Another constraint on LLDCs' exports is when their transit country experiences security deterioration along the corridor or in general. For instance, Mali and Burkina Faso depend on the port of Abidjan for their cotton exports.[19] Owing to the security situation prevailing in the region since late 2002, exporters in these countries have to use longer land transport corridors. Cotton traders have estimated, that the additional cost burden amounts to not less than 110 euros per ton, a serious limiting factor to the competitiveness of West African cotton in world markets.

[19] *Chronique de matères premières,* 3 March 2003.

CHAPTR II
THE SPECIAL CASE OF COMMODITIES TRADE

Case studies in commodities

Case 1: Coffee export: Rwanda versus Côte d'Ivoire

24. Rwandan coffee export logistics transaction costs are about 11.4 per cent of FOB cost at the port of exit[20] relatively low for an African LLDC and an extremely high financial cost (36 per cent of FOB export cost). The sensitivity of international prices to the exporter as a result of tax and the relatively high FOB price of Rwanda's coffee of $1.88/kg [21] lead to weak performance by coffee exports. The key problem for Rwanda is costly inputs, higher fiscal base at regional standards and a lower share of revenues at the production level. A study concluded that the coffee problem for Rwanda is less of an export logistics problem than a fiscal problem. The following perceived issues of concern were highlighted by the study:[22] (a) the fiscal base discouraging profit sharing with farmers; (b) the high cost of international transport to port and consequent high financial inventory cost; (c) deficient and expensive input distribution logistics; and (d) insufficient economies and transport logistics internationally.

25. A 2003 study[23] of Côte d'Ivoire found that with a farm-gate price of US$ 0.70/kg, a FOB price of US$ 1.08/kg and a sales price (Europe) of US$ 1.30/kg against an international price of US$ 0.97, exporters in Côte d'Ivoire, like their Rwandan counterparts, were doing business at a loss. For Côte d'Ivoire, the relative operational costs, including transport (3 percent) and financing (2 per cent) and the port costs (9 per cent), placed its exporters in a much more favourable position than the Rwandans (facing an 11.4 per cent transit cost share of CIF costs). The difference is due to transport to the port of exit (Mombasa, Kenya, and Dar-es-Salaam, United Republic of Tanzania, for Rwanda; and Abidjan for Côte d'Ivoire) and to financing.

Case 2: Perishable exports from Burkina Faso and Pakistan

26. These two countries export fresh mangoes to European and other Asian destinations. The transit cost share is about 88.4 per cent of CIF value for air transport (high-quality varieties) and 2.1 per cent for maritime transport (low-quality varieties). The use of air transport in French-speaking African countries, except for Cameroon, was at a disadvantage (FF 5.00– FF 5.75) compared with English-speaking African countries. This was attributed to monopolistic practices brought about by the Yaounde convention of 1961, which gave Air Afrique exclusive air freight rights and a monopoly of airport operations and pricing of services, while L'agence Pour La Sécurité de la Navigation Aérienne en Afrique et à Madagascar (ASECNA) was given control of air traffic. Burkinabe mangoes' cost factors are highlighted in Table 10, which shows that there is an obvious substantial land transport expense for a typical LLDC and continuity of a situation of transit cost dependence (before insurance).

Table 9. Mangoes' export cost structure in Burkina Faso

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[20] FOB price in these case studies means at port of exit (either Abidjan for West Africa, or Mombassa or Dar-es-Salam in East Africa).
[21] World Bank; Rwanda 1998, Commodity Export Identification and Logistics, cited by de Castro, pp. 6-7.
[22] UNCTAD; consultancy report by C. de Castro, Trade and Transport Logistic study, Agricultural Commodities, March 2003.
[23] Ibid.

Cost items	% Share transit costs
Local non-transport costs	45
Transport to collection centre	5
Land transport to Abidjan	16
Port transit	3
Maritime transport	33
Total	**100**

Source: UNCTAD, consultancy report by C. de Castro (items aggregated).

27. With a farm-gate price of US$ 0.41/kg and a final transaction cost of US$ 0.22/kg and a non-factor costs (NFC) share of final value of 39.17 per cent, the Pakistani case is substantially more competitive than the Burkinabe one, which has a 55 per cent NFC share of CIF value. Pakistan's logistics problems, namely (a) outdated commercialization practices, (b) inadequate storage facilities, (c) sub-standard packaging and conditioning, and (d) poor development of refrigerated transport, render it less advanced than Burkina Faso on agricultural trade logistic but has a competitive advantage in transport logistic costs.

High costs of imported inputs

28. Cost factor analyses of imported inputs (such as cartons for perishable exports) show non-factor costs shares on transit cost averaging over 40 per cent in Nepal and 45.3 per cent in Rwanda. For Rwanda, there was a unit price escalation between the port of Antwerp (Belgium) and Kigali (Rwanda) of 82.5 per cent (from RWF 189 to RWF 345). Generalized transport costs on imports as a result of incremental financial inventory cost due to long transit time and immobilization are one of the most critical competitive disadvantages. It is also well established that the costs of fuel energy are highest for LLDCs for similar reasons, and that the international price fluctuations as well as domestic taxes impact negatively on transport costs incurred by LLDCs' agents in both export and import operations.

Critical issues for commodities exports in LLDCs

29. The high costs of transportation associated with commodities trade by LLDCs in the case studies reviewed also hid the inefficiencies that contribute to the worsening of trade competitiveness of LLDCs. There is room for improvement and realizing potential trading opportunities predicted by gravity analyses.[24] Such improvement through concrete measures and actions can be taken to address the bottlenecks (outlined in box 2) at various stages of the export/import logistical chain in LLDCs.[25]

[24] See Limao and Venables, op. cit.. and Venables and Limao Geographical disadvantage: Hecksher-Ohlin-Von Thunen model of international specialization, Journal of International Economics, 58 (2002), pp. 239-263.
[25] De Castro, op. Cit.

Box 2: Some of the key constraints to be addressed

(a) Many LLDCs have not been able to realize their potential in the export of agricultural commodities such as horticultural ones (fruits and vegetables, herbs and spices, cut flowers), lake/artisanal fish, and meat owing to a lack of logistical and control systems (absence of sufficiently organized cold chains from farm gate, inadequacy or absence of collection centres), atomistic producers with no critical mass for export and business connection with similar commodity chains in contiguous transit countries, no organized produce transport link to port of exit, and absence of often modern testing laboratories and inspection facilities and personnel).

(b) Besides traditional commodity chains organized often by state intervention (coffee, cotton, tea), other commodities in LLDCs' do not benefit enough from successful export commodities sectors in neighbouring coastal countries.

(c). Most LLDCs are penalized in advance by a transport sector which is very much dependent on heavy load trucking while facing expensive and price-volatile fuel.

(d) There is an accumulation of inefficiencies in the LLDCs logistical systems which can be illustrated by the following facts, among others:[26]

1) At least 50 per cent of the containers are verified in Africa, 10 per cent in Asia and 2 per cent in Europe.
2) Container clearance for most LLDCs takes up to 20 days at least, but less than 5 days in Asia.
3) The complex transit procedures achieve very little but encourage illegal payments.
4) Port productivity is only 30 percent of average norms for the same equipment.
5) Transit charges are high, and congestion and surcharges are a persistent problem despite excess Port capacity.
6) For railways, freight volumes have halved over twenty years while trucks have become the dominant freight mode at a higher cost.
7) Substantial demand for railways exists but locomotive availability is less than 50 percent.

[26] ibidem

CHAPTER III
NATIONAL AND INTERNATIONAL POLICIES AND MEASURES

30. Participation in regional and international trade is important to LLDCs and transit developing countries in promoting economic growth, diversification and industrialization, and development. In this context, given the trade structure and costs faced by LLDCs and transit developing countries, there is a serious need to redress the weaknesses and cost-related factors in transport infrastructure for these countries to overcome their geographical handicap. Transport costs depend on both geography (distance and borders) and the level and quality of transport and communications infrastructure (both the physical infrastructure and the effectiveness of its utilization). The elasticity of the flow of trade with respect to transport costs is large, about –3, which implies that the volume of trade would drop by about 30 per cent if transport costs were to rise by 10 percentage points. At the same time, infrastructure improvements in landlocked countries and their transit neighbours could have important results. For example, Limão and Venables show that if a landlocked country could improve its infrastructure quality considerably, it would cut in half the "transport cost penalty" for being landlocked, and more than double its volume of trade.[27]

A. Trade in goods

31. Landlocked developing countries face considerable distances to major markets, affecting the value and volume of such trade. As shown in table 1 of the Annex, the proportion of LLDCs' exports to Quad countries is relatively small. For the period considered (1996-2000), the share of LLDCs' exports to Quad countries does not exceed 35 per cent on average for any country[28] and attains around 14 per cent on average for the whole set of countries. Transport costs (and inadequate production) seem to be a more restrictive barrier than tariffs are in LLDCs' trade with developed countries (although tariffs do remain and, moreover, other entry barriers to major markets may impede easy access by exports from LLDCs).

32. Table 2 of the Annex shows the number of domestic and international tariff peaks in trade with the whole world and trade with Quad countries.[29] The proportion of domestic and international peaks in trade with Quad countries, as compared with the number of those peaks in trade with the whole world, is fairly small. This fact, combined with low trade with Quad countries, implies that transport costs currently have a greater impact on trade flows than tariffs per se (although market entry conditions and non-tariff barriers may have obstructed imports from LLDCs).

33. In this context, national trade policies and market access and entry conditions, in particular in major markets that have a negative impact on LLDCs' trade performance, should be addressed. Greater market access and the reduction of market entry barriers for export products of LLDCs can be usefully addressed in the context of WTO negotiations under the Doha work programme, as well as in regional trade agreements. The provisions of preferential trade access for LLDCs,

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[27] Limão and Venables (see note 1) show that if a landlocked developing country at the 25th percentile in the distribution of infrastructure quality among all countries sampled were to move to the 75th percentile, this fact would cut the "transport cost penalty" for being landlocked in half, and more than double its volume of trade.
[28] For Lesotho, data are available only for 2000.
[29] The term "international tariff peaks" is sometimes used to refer to tariffs on individual tariff lines that are above 15 per cent. This definition is mostly used in relation to tariffs on imports of manufactures. For agricultural tariffs, however, international tariff peaks would be higher and the figure of 100% is used here.

including for LLDCs among the LLDCs, can be important in improving the competitiveness of these countries. These preferential measures, however, are useful only to the extent that the beneficiaries make effective use of them and that realistic rules of origin matching the productive strength of LLDCs are devised. LLDCs need to take proactive roles in international negotiations to improve the conditions of market access and entry. At the same time, the international community needs to actively support LLDCs in addressing their special situation and adopt specific provisions and measures to facilitate the trade of LLDCs.

34. In addition, domestic cost-diminishing policies such as public investment in infrastructure improvement need to be given particular emphasis. In this respect also, there is an important role for lending from the international financial institutions or bilateral lending and aid flows, as the return on infrastructure tends to be quite long-term and relatively unattractive to commercial lending. International efforts, such as the Global Framework for Transit Transport Cooperation between the Landlocked and Transit Developing Countries and the Donor Community, which aims to reduce transit costs for both imports and exports of goods by LLDCs, thus remain urgently needed. In addition, security-related actions are being taken in major developed markets that will affect international trade going to these markets. An example is the United States' Container Security Initiative and the Customs Trade Partnership Against Terrorism, which aims at enhancing security of supply chains, detecting high-risk cargoes at ports of origin and setting up new partnerships among customs administrations. Meeting these requirements for LLDCs will require additional resources and trained manpower, and can cause delays in exports from these countries.[30]

B. Trade in commodities

35. LLDCs are not realizing their potential in commodities trade, to a large extent owing to transport and physical infrastructure issues. The macroeconomic context of trade facilitation thus should be considered to bridge the widening competitiveness gap, which threatens to exclude LLDCs and their traders from links with large companies as reliable suppliers. Key questions to address include the following: (a) what prevents LLDCs from having the quality of external transport services necessary to encourage export-oriented industries; (b) how can LLDCs best take advantage of the potential offered by modern logistics to lower import costs and increase export returns; (c) how can oil - and gas - importing countries mitigate the negative effects of the international price volatility of those commodities on their transport cost; and (d) what needs to be done by Governments and the international community to bring policies into line with the transit realities of the 21st century?

36. At the national level, an integrated approach to transport must be adopted or improved from existing action plans to increase the overall efficiency of trade logistics channels.[31] All actors involved in commodities trade (farmers, growers, traders, enterprises) and the government agencies should be mobilized to design, adapt and implement such action plans, which should aim at:

[30] See, for more discussion, "Report of the Expert Meeting on Efficient Transport and Trade Facilitation to improve Participation of Developing Countries in International Trade: Problems and Potential for their Application of Current Trade Facilitation Measures by Developing Countries" (TD/B/COM.3/52 - TD/B/COM.3/EM.17/3, 12 December 2002).

[31] A checklist of national policy areas per type of transit infrastructure can be found in the de Castro report to UNCTAD, chapter IV (see above).

a) Reducing the competitive disadvantage affecting trade and transport logistic transactions, by maximizing use of local resources, by limiting procedural and financial cost, and by organizing internal and external competitive trade platforms for exporting selected key agricultural commodities;
b) Facilitating official and private logistic channels rendering agricultural exports and inputs economically cost-effective.

37. With regard to the exposure of oil-importing LLDCs to oil price fluctuations, their Governments may examine ways of designing a tax-cum-subsidy scheme on fuel in favour of commodity export and intermediate goods import. Through such a scheme, taxes can be lowered when oil prices are high and increased when they are low. The funds generated when tax income is high can be used to buy options in commodity markets for oil. Consequently, the Government may use increased profits on the options generated by oil prices, either to subsidize prices in the export transport sector or intervene to improve overall transport infrastructure and other logistical factors with a direct impact on international trade transport costs.

38. At the regional level, LLDCs and their transit neighbours need to engage in continuous dialogue to update agreements on transit with a view to harmonizing international trade services practices to increase time efficiency and reduce costs along the export process from the farm to the port of exit. This may include the optimal use of warehouses, cold storage for perishables, and commodity auctions/exchange at the port of exit. Countries may undertake regional cooperation aimed at increasing logistics economies. Measures to that end may include the following:

a) LLDCs may, for instance, work with transit countries to organize commodity chains regionally in such a way that commodity-specific consortia of regional exporters can undertake group negotiations with northern agro-food wholesalers and processors or with supermarkets on quality harmonization requirements and, more importantly, to obtain price deals and arrangements for containers' space and frequency with sea transport companies;
b) LLDCs may put their commodities in line with leading commodities exported by transit countries in the way that the banana export system by sea in Cameroon and Côte d'Ivoire has had a drag-effect on the export of pineapples and mangoes in those countries through shipping;
c) LLDCs may join transit countries to develop and coordinate common export facilities. In this instance, the usefulness of organizing physical preparation and control outside the port area may be examined. Another option may be to make systematic for all commodities the use of a system such as the Mombasa coffee and tea auction used by countries exporting through the East African northern corridor in order, for instance, to assure importing markets of a year-round supply – such as is the case for pineapples in Côte d'Ivoire and Ghana, beans in Kenya, and fish in Senegal – which is crucial to consumer loyalty necessary for establishing an appellation of origin;
d) Working with transit countries to optimize the boat loading rate with respect to commercial requirements and transport conditions required by quality, as well as the organization of regular shipments to and from importing markets, would also contribute to lowering overseas transport costs and enhance the competitiveness of LLDCs originating products;
e) LLDCs may coordinate with transit countries to master the cold chain from collection to port of exit in order to minimize losses and to conform to the slogan

"one hour lost in departure to being refrigerated will be one day less for sale at destination".[32]

39. At the international level, a concerted effort by LLDCs' governments, in partnership with relevant UN agencies, multilateral financial institutions and the donor community, could consider launching a long-term holistic programme targeting LLDCs and their trade corridors partners to address the bottlenecks of trade logistics channels and facilitate regional cooperation towards harmonization in management systems, procedures (customs, trade, banking, insurance) and policy areas. Particular attention may be paid to the specificity of existing export commodities in terms of the conditions to be met in the medium term to increase the export of greater-value-added agro-food products, agricultural raw material and mineral and metals at competitive and fair prices.

C. Environmental matters

40. Many of the environmental problems – desertification, soil degradation, deforestation, and water pollution and limited fresh water resources – affecting LLDCs are not unique to this set of countries. However, while the geographical and related climatic characteristics of LLDCs vary widely, most LLDCs have one or more geo-climatic features that significantly increase their susceptibility to these environmental instabilities. For example, extreme elevations, large distances from oceans, and low latitudes – which separately or together characterize many LLDCs – are all factors that can severely limit their capacity, and lead to highly variable humidity and precipitation levels. Moreover, most LLDCs are situated in high continental plains or mountain ranges, where, relative to coastal regions, soil fertility and river densities are low. Although a small subset of LLDCs in South Central Africa – situated in a continental flood plain – are not subject to these conditions, high population densities and growth rates there have contributed to significant deforestation and subsequent desertification and biodiversity loss. Taken together, these facts point to a significant challenge faced by LLDCs in managing economic activities, including export-oriented production and trade, closely linked to freshwater availability, soil productivity and biodiversity.

41. Nearly 70 per cent of aggregate exports from the 30 LLDCs, as discussed previously, comprise mineral and agricultural commodities and tourism services (see figure 1). Environmental factors play an important role in each of these sectors. In over half of the LLDCs, where agriculture and tourism services are the principal economic exports (see table 1), soil degradation and erosion arising from deforestation, intensive cultivation and grazing, increased use of chemical inputs in agricultural production and inadequate sanitation have led to substantial desertification, biodiversity erosion and groundwater contamination. In a third of the LLDCs where minerals make up the majority commodities exports (see table 1), output levels for mining activities are commonly constrained by rigid watershed management requirements and efforts to reduce local air pollution and safely dispose of mining tailings. In the remaining LLDCs, whose exports are dominated by manufactures (see table 1), wastewater discharges from industrial activities represent a primary environmental problem.

42. Freshwater resource integrity is especially dependent on proper wastewater management in LLDCs where ocean dumping of wastewater is not an option and water conservation is often a

[32] UNCTAD; consultancy report by G. Lherault (Cabinet GRESSARD) for COLEACP, August 1998, and updated for presentation at UNCTAD regional workshop on horticultural sector diversification in Africa, Bamako, February 2001.

strict necessity owing to water scarcity. Yet many LLDCs have high levels of water pollution in reservoirs and groundwater due to insufficient or absent infrastructure for treating wastewater from industrial, urban and mining activity, and from agricultural runoff containing high concentrations of pesticides and fertilizers. The greater use of legal and economic instruments to reduce water pollution, deforestation and desertification, and thereby increase the long-term sustainability of economically important natural resource bases, has been implemented in a number of LLDCs with considerable success. For example, in Uganda such policies have resulted in a marked decrease in effluent discharges into Lake Victoria and resulted in the improved productivity of its fisheries, a major source of exports. In the Lao People's Democratic Republic, where applied, quotas and permits for timber harvesting have extended long-term yields of forests. In Mali, land tenure reforms have led to increased agricultural productivity in the cotton sector, which accounts for 80 per cent of the country's exports.

43. Although these actions can ameliorate environmental conditions, they may not ensure sustained economic growth unless they are accompanied by complementary trade-related policies and actions. Environmental measures can sustain trade only to the extent that it provides the income stream needed for producers of export goods and services to cover the costs of environmental protection. This may not occur when world prices for goods and services are lowered from full-cost equilibrium values by market interventions – including, for instance, production and export subsidies by countries that are major market suppliers. International trade policies that reduce the scope for such interventions, particularly in the agriculture sector where they are most prevalent, would therefore facilitate the successful implementation of environmental policies and measures in LLDCs where they are critically needed.

44. The confluence of disadvantageous geo-climatic features, coupled with the importance of agricultural, tourism and mining activities for LLDCs, necessitates effective management of these countries' natural resource endowments, ecosystems and environmental quality. Developed countries and international organizations should thus integrate into their capacity-building programmes specific elements to help LLDCs develop environmental policies adapted to national conditions; adopt environmentally sound production methods; and acquire technologies and infrastructure required for pollution prevention and reduction as well as to increase efficiency of natural resource consumption, particularly to reduce desertification affecting many LLDCs. Strengthening international cooperation, including through financial assistance, enhanced foreign investment and integrated export promotion strategies, is critical for ensuring LLDCs' sustained economic development

45. Capacity-building programmes provided by international organizations on critical trade and environment issues facing LLDCs and transit countries must accompany efforts to enhance transit efficiency, reduce trade costs and improve competition. Unfortunately, to date most LLDCs and transit countries have received little support for trade-environment policy assessment, development and implementation. Given the fact that over 75 per cent of the LLDC population (and in transit countries as well) is engaged in agricultural production in rural areas, such programmes could focus initially on helping beneficiaries to address trade and environment issues in the agricultural sector.

46. National trade and industrial policies, in LLDCs as well as in other developing and developed countries, also have an important role to play in sustainable development. Nearly all LLDCs have identified commodities diversification as a promising mechanism to reduce pressures on natural and environmental resources while increasing the magnitude of export

revenues. Although the Lao People's Democratic Republic, Lesotho, Nepal, Swaziland and Zimbabwe have recorded marked progress in this area, most other LLDCs have not succeeded in significantly increasing their share of value-added manufactures. Market entry barriers, together with high trade costs for exports to these markets, remain as major deterrents to the capital investments needed for a transition to greater diversification.

D. Competition Policy

47. Enforcement against restrictive business practices (RBPs) by large transport firms may be of benefit to LLDCs, and indeed for coastal countries and their export destinations. However, account would need to be taken of questions of efficiency (particularly scale and scope economies). In some cases, authorization of cooperation among suppliers of transport services may be necessary in order to avoid market exit by some firms, leading to greater concentration and market dominance. Although such enforcement action is necessary, it would not suffice by itself; it would be necessary to factor in competition policy considerations in the granting of business licences and in maximizing the role of privatization, competitive tendering and/or the granting of concessions, in respect of the quality, pricing, servicing efficiency and maintenance of infrastructure such as ports, airports, roads or railways.

48. Competition policy might be used, for instance, to ensure that the bidding process for privatization or for the granting of concessions does not involve collusionary or exclusionary behaviour, and to assist in creating market structures allowing for the maximum competition possible. In most countries of the Commonwealth of Independent States competition authorities have the right to participate in demonopolization programmes. In Kyrgyzstan, for example, the National Commission for Defence of Competition has taken a number of measures to reorganize the railroad sector.[33]

49. An integrated approach to different forms of transport or other infrastructure would also be advisable. This is corroborated by experiences in East and Southern Africa where distortions in service provision along most transit transport corridors have occurred as a result of monopolies. There has been a major shift of traffic from rail to road, because rail companies have remained monopoly service providers owned and operated by Governments, while the road transport industry has become largely privately owned and is more efficient.[34] Even though a relatively more competitive road transport industry may in the short term appear to provide benefits to users through a more efficient service, in the long term the economic cost to the economies of these countries through increased utilization of road transport may be higher. Nor can it be assumed that all is well in the road transport industry in these countries – there are indications that in some East African countries (also in Nepal and in Bhutan), trucking associations may be exercising market power over road transportation, driving up prices.[35] Thus, greater competition in rail transport in these countries may facilitate greater competition in road transport and have other important economic benefits.

50. However, the success of competitive tendering would mainly depend upon whether there is sufficient competition for the contract in the first place. A key problem of privatization in poorer developing countries has been the mismatch between the large number of public enterprises to be

[33] See UNCTAD consultant report by N. Yacheistova, Competition policy in countries in transition: Legal basis and practical experience, UNCTAD/ITCD/CLP/Misc. 16.
[34] See UNCTAD consultant report by InfraAfrica (Pty.) Ltd., Review of progress in the development of transit transport systems in Eastern and Southern Africa, UNCTAD/LDC/115.
[35] See Consumer Unity and Trust Society, 7-Up Advocacy document (forthcoming).

sold off and the shortage of entrepreneurs that are interested in acquiring them, have the requisite financial resources for acquisition and further investment, and are capable of operating them efficiently given problems of scale economies and limited purchasing power. Thus, important as the role of private investment has been in financing transport infrastructure, it remains limited to more advanced developing countries. In a context of eroding ODA flows and widespread unmet transport infrastructure needs, 26 out of the 30 landlocked countries were left out of any private funds flows, as stressed at the Third UN Conference on the LDCs.[36] While innovative ways to support privatization of transport in southern Africa are now being pursued, there remains a shortfall in investments and other bottlenecks affecting the quality and efficiency of transit transport for landlocked countries generally, and especially in Africa.

51. It may therefore be difficult to obtain substantial private sector investments in infrastructure without granting lengthy concessions. In this regard, the Government of Bolivia has granted railway concessions for 40 years in return for a $25 million investment in such railways, while the Government of Paraguay is completing studies to give 25-year concessions on different roads for investments ranging from $75 to 170 million.[37] Competition problems would be particularly acute where large economies of scale are involved, and competition may in fact be impossible where there are natural monopolies. However, such problems may at least be alleviated by factoring in competition policy when designing the concession contract or relevant regulatory framework, for example by setting charges, rates of return or standards of service in the light of their effect upon competition and efficiency. These options can be undertaken if political obstacles to regulation are also tackled; it is reported, for instance that in Bolivia a comprehensive Transport Code has not yet been adopted because of objections by transporters, including objections that the draft gives too much power to the public sector regulatory body which would have been set up to protect the public from abuse of monopoly power by privatized railways, airlines and telecommunications, and to ensure that these monopolies operated efficiently.[38]

52. Even where competitive tendering would be possible, it would not be enough. In the context of the Central Asian landlocked countries, for instance, it has been emphasized that while competitive tendering for the construction and maintenance of equipment and infrastructure would be a good start, it would have to be pursued through effective legislation, adequately drafted and sufficiently and impartially enforced regulatory mechanisms to ensure free competition, and capacity-building efforts to strengthen the institutional capabilities of governmental agencies and the judiciary and generally build up a competition culture.[39] The need for such long-term efforts would be heightened by the fact that, even where there may be sufficient competition within a given sector upon privatization, the market exit of some players may later give rise to competition problems.

53. In Bolivia the liberalization of the air transport industry resulted in the national carrier, Lloyd Aereo Boliviano (LAB), facing tough competition from Aero Sur, a private carrier that has taken a large share of the domestic market (which had been privatized through an international bidding

[36] See UNCTAD consultant report by J. Stone, Infrastructure development in landlocked and transit developing countries: Foreign aid, private investment and the transport cost burden of landlocked developing countries, UNCTAD/LDC/112.

[37] See UNCTAD consultant report by R. P. Castellón, Review of recent progress in the development of transit transport systems in Latin America, UNCTAD/LDC/113.

[38] Ibid.

[39] See UN General Assembly, Transit environment in the landlocked States in Central Asia and their transit developing neighbours, A/55/320.

process, and taken over by Brazilian interests).[40] Thus LAB has now left the domestic market to Aero Sur and another airline company. However, Aero Sur has had financial problems caused by the economic crisis and intense competition. On international routes, competition by American Airlines and other problems have resulted in losses and danger of bankruptcy for LAB. While the intensity of competition is not necessarily related to the number of competitors, particularly if market entry barriers are low, heightened surveillance by competition authorities may still be necessary in such situations.

54. Another case involves international transport services, which are crucial in stimulating international merchandise trade. They are believed to have a more important impact than tariff duties in many countries, which in any case have dropped substantially in recent years. However, commensurate declines in shipping costs have not occurred in spite of major technological advances owing to a mix of public and private factors. On the government side, restrictive government policies, quantitative restrictions and regulations that restrict market access by foreigners limit the extent of competition in international transport services and keep rates high.

55. In respect of the private sector, international transport services are dominated by a few large cartels and perfect competition is seldom the rule of the game in determining shipping rates. By engaging in anti-competitive behaviour, the private sector contributes to higher transport costs. Hence, the liberalization of the sector may be as (or more) important as tariff liberalization in promoting international trade. Shipping is the mode of transport carrying by far the largest share of world trade. However, developed countries own the vast majority of the world fleet. The 20 leading carriers control around 60 per cent of the worldwide capacity and have established trade sharing, price fixing and vessel pooling arrangements undermining free competition in the shipping industry. Shipping lines of developing countries have less access to technologies, know-how and capital than those of developed countries. In this uncompetitive situation, a number of them have been relegated to "slot chatterers" and thus to marginal participants in the liner shipping markets. Exceptions are a number of developing economies whose companies have started to play an important role in world shipping, such as Taiwan Province of China, the Republic of Korea, China, Singapore, Malaysia and Kuwait; others are playing a key role at regional levels, for example Mexico, Colombia and Chile.

56. The example relating to shipping would also suggest that national action by itself would not suffice to resolve the problems of landlocked countries – there would be a need for bilateral and/or regional cooperation in this area, involving other countries with a stake, including neighbouring coastal countries, countries within the same regional or subregional grouping and countries or regions to which they export or from which they import. In respect of the transport routes of the Central Asian land-locked countries, for instance, the need for cooperation and coordination among different countries has been emphasized, since failure to agree upon a harmonized set of rules and procedures for a transport corridor would impede efficient transit operations, with a consequent increase in costs, and thereby undermine the external trade efforts of the countries concerned and their competitiveness in world markets.[41]

57. To the extent that the importing or exporting costs of LLDCs may be raised by possibly insufficient or inappropriate competition policy action in transit countries or in their trading

[40] See UNCTAD/LDC/113.
[41] See A/55/320.

partners, such as by the grant of exemptions in sectors such as shipping or insurance,[42] abuse of dominance in such sectors as rail transport or port operations, or enforcement which does not sufficiently take efficiency considerations into account, there may be a need for strengthened consultations and cooperation on such questions among the countries concerned. Intra- or interregional cooperation on competition policy does take place among numerous regional or subregional groupings, including (among those with membership from some landlocked countries), the Treaty Establishing the Economic and Monetary Committee of Central Africa (CEMAC), the OHADA Treaty on the Harmonization of Business Law, the Treaty Establishing the Common Market for Eastern and Southern Africa (COMESA), the Southern African Development Community (SADC), the Andean Pact, Mercosur, the 1993 CIS Intergovernmental Treaty on the Implementation of a Coordinated Competition Policy, or the Cotonou Agreement.[43]

58. Such treaties may provide for the establishment of common competition rules relating both to RBPs by firms and to governmental activities, greater harmonization of national competition policies, coordination of joint activities, exchange of information and/or consultations on cases with a transborder effect upon competition. Both national and regional efforts in this area, however, have been hampered by lack of resources, expertise or specificity in the relevant legislation, agreements or guidelines. And, so far, it does not appear that national, intra- or interregional action has placed any special emphasis on the facilitation of transit transport, despite the contribution this would make to trade, the strengthening of economic integration and economic growth.

59. International support for LLDCs and transit developing countries in competition matters should involve creating appropriate frameworks for dialogue, as well as complementarities and interaction, relating to the following: technical assistance aimed at maximizing the role of competition policy in the granting of business licences, privatization, competitive tendering and the granting of concessions relating to infrastructure, taking due account of efficiency factors; technical assistance relating to the drafting and enforcement of competition legislation or sectoral regulation, as well as institution-building; and strengthened international co-operation where importing or exporting costs or other difficulties of LLDCs may be increased by either insufficient or inappropriate competition action policy by transit countries or by trading partners.

60. Such support could be provided within the framework of existing development cooperation agreements. The ACP-EU Cotonou Agreement, for example, provides (in Article 45) that cooperation in the area of competition policy shall, in particular, include assistance in the drafting of an appropriate legal framework and its administrative enforcement, with particular reference to the special situation of LDCs. Such competition policy provisions of economic partnership agreements might usefully be fleshed out, implemented and funded with a focus on alleviating transit problems of LLDCs, with the cooperation of transit countries and, as appropriate, within the context of competent regional or subregional organizations. Moreover, UNCTAD's Intergovernmental Group of Experts on Competition Law and Policy could take competition policy issues relevant to the transport problems of landlocked countries into account in the context of consultations. This should also be considered in the negotiations on trade in services at the WTO.

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[42] For a review of such exemptions, see UNCTAD, The scope, coverage and enforcement of competition laws and policies and analysis of the provisions of the Uruguay Round Agreement relevant to competition policy, including their implications for developing and other countries (TD/B/COM.2/EM/2).

[43] See UNCTAD, Experiences gained so far on international cooperation on competition policy issues and the mechanisms used, TD/B/COM.2/CLP.

E. Regional integration and cooperation

61. Cooperation between transit and landlocked countries at the regional level needs to address issues related to the harmonization of rules and regulatory frameworks that would be instrumental in addressing road blockages, closures during the weekends and public holidays and introduction of driver identification document exempting drivers from having to obtain visas. The development of cooperation between national control services on each side of the border and the introduction of "one stop" technology, improved training of border personnel and improved quality and capacity of border infrastructure can also be implemented bilaterally. These transit trade issues and transport cooperation will buttress the trade agreements formed within these regional integration groupings and enable the flow of trade in goods to be generated and sustained.

62. An example is the Southern African Development Community (SADC), which has initiated a "one stop" concept. Member States have endorsed the concept so as to minimize delays and inefficiencies at border posts. The concept is a package of border post legal reform with three legal instruments, namely a memorandum of understanding (MOU) on border post procedures, facilities and management; model legislative provisions (MLP) to enable members implement the MOU; and model bilateral agreements developed by the SADC secretariat in collaboration with member States and endorsed by SADC Committee of Ministers. The pilot project for the programme is being tested between Zambia and Zimbabwe; if this programme is successful it will be implemented at all border points between SADC countries.

63. Most regional integration groupings have set out strategies for transit transport, but the political and economic will for the implementation of the strategies is still lacking in most cases. All the regional agreements in East and Southern Africa have as one of their principal objectives in transport the improvement of transit transport systems and facilities. As regional agreements begin to consider and incorporate negotiations on the liberalization of trade in services, into which the provision of transport services falls, it is important for member States of regional groupings, both landlocked and transit States, to take up national reforms that would lead to a win-win situation for all stakeholders.

64. LLDCs have to consider the development of trade and transport strategies, such as finding market niches for high-value products where transport cost is less important; increasing competition between transit States for access to the sea to reduce dependency; seeking policies that are mutually advantageous with transit States; and minimizing transport barriers. Barriers associated with the costs of international transport services play an important role in influencing the scope and scale of international trade flows. The costs are also affected by other market entry and tariff barriers as tariffs, quotas or standards and natural barriers such as time, distance or language.

65. Aid programmes to improve transport infrastructure linking landlocked countries to ports or other infrastructure of transit countries would necessarily require cooperation among these countries, and may therefore not be easily dealt with through country-based donor programmes. Such problems can be most appropriately tackled at the intraregional level. Appropriate frameworks could be provided by existing agreements, which might be reviewed and updated as necessary, or combined with new initiatives such as the development of trade corridors.

66. Development cooperation agreements could be fully exploited to deliver concretely the provisions relating to transit trade issues and related policy issues such as in competition matters.

The ACP-EU Cotonou Agreement, for example, provides that particular attention would be given to the special needs of LDCs, island and landlocked ACP States. Other regional and subregional groupings, such as SADC, have similar objectives and provisions and deserve international support in operationalizing transport infrastructure, policies and facilities.

F. Multilateral trading system

67. The WTO work programme adopted by the Fourth WTO Ministerial Conference in November 2001 provides for negotiations and work in sectors of key development importance to LLDCs and transit developing countries. These negotiations, if they proceed as scheduled, would be competed by December 2004 and enter into effect in 2005. The negotiations include market access, agriculture, non-agricultural products and trade in services; and work on trade and environment work, trade facilitation, trade and competition, and trade and environment. The latter tackle issues affecting the development interests of landlocked and transit countries. Those countries that are WTO members thus should be actively engaged in the discussions and negotiations on these issues so that their interests are reflected.

(a) Market Access and Market Entry Issues

68. There is a need to improve market access and market entry conditions that LLDC countries face in developed and other developing countries. Improving market access conditions for LLDCs can help diminish the transport cost disadvantage that these countries face. Such issues can usefully be addressed in the context of WTO negotiations under the Doha work programme as well as in regional trade agreements.

69. Even though a large number of LLDCs have the benefit of preferential market access conditions through GSP or ACP preferential schemes, or the EU's Everything but arms Initiative, many do not, and there is some justification for extending the schemes to include all LLDCs. The WTO Doha Ministerial declaration requires that developing countries be granted precise, effective and operational special and differential treatment, which is particularly of economic relevance to LLDCs to maintain the necessary policy flexibility to promote their trade and industrialization.

(b) Trade in Services

70. Issues related to transport services are dealt with under the General Agreement on Trade in Services (GATS) at the WTO, where land transport (road and rail), maritime transport, internal waterways, air transport, space transport, pipeline and services auxiliary to all modes of supply are considered. Upon completion of the Uruguay Round of multilateral trade negotiations, Members could not reach agreement regarding commitments in the maritime transport sector. This situation was reflected in the Ministerial Declaration on Negotiations on Maritime Transport Services.[44] The main problems in the negotiations on maritime services during the Round related to commercial presence. However, the presence of natural persons also remained unbound in most cases, and the lack of commitments by major players in this area is particularly disappointing for developing countries. Shore-based personnel of shipping companies and those providing auxiliary services were to be subjected to restrictions in line with horizontal commitments. Among the 29 WTO Members that currently have commitments in international shipping services, 19 are developing countries.

71. The GATS negotiations are ongoing and, in early 2003, WTO member States were in the request/offer stage of the negotiations. All the proposals that were submitted in the previous stages of the negotiations coincide in that they stressed that the issue of maritime transport services should be addressed, the MFN clause should also enter into force in this sector, and the negotiations for liberalization in this sector should be resumed. The first important question to be asked is whether this would be in the interest of developing countries, including LLDCs and transit developing countries, and if so under what conditions. Developing countries' position regarding this possibility, including such conditions, should clearly be part of the discussions and definition of broad aims for negotiations in this sector.

72. Landlocked and transit member States need at this stage to identify their interests as they receive requests, so as to be in a position to defend these interests during bilateral negotiations to submit offers. Such preparations include the assessment of the services sectors, in particular the transport sectors, and the impact and implication of liberalization and development of multilateral disciplines.

73. So far, developing countries, including LLDCs and transit countries, have submitted a comparatively small number of proposals in the services negotiations, reflecting the difficulty in clearly identifying their negotiating objectives. At the same time, however, a major concern of these countries in most sectors is capacity (supply and competitiveness) building rather than access to markets (which is focused primarily on the movement of natural persons). In this respect, it would be in their development interests to preserve the architecture of the GATS Agreement, particularly the "positive" list approach, enabling them to select the sectors, sub-sectors and modes of supply in which they wish to make commitments.

74. The challenge for developing countries, including LLDCs and transit countries, concerns the incorporation of their specific needs in the framework of GATS Article IV, leading to transfer of technology and capacity building. However, experience shows that in some areas, such as construction services, developing country suppliers maximize their capacity building when engaging in joint ventures and partnerships with foreign firms in the delivery of services. This

[44] The United States delegation raised concerns about the quality of offers and, as a result, deemed itself unable to make an offer of its own.

measure - a requirement to establish as a joint venture - could be treated as a limitation on trade liberalization.

75. LLDCs and other developing countries are engaged in the increasingly complex negotiations on services, which are going beyond sector-specific liberalization of market access and national treatment. At the same time, they have to tackle the new issues of e-commerce and its impact on liberalization of trade in services. In this light, LLDCs and transit developing countries could achieve progress in negotiations on increasing their participation in trade in services by focusing on how to implement GATS Article IV in the sectors of interest to them and in articulating the associated sector-specific issues and measures of immediate concern to them.

(c) Competition policy

76. In respect of addressing RBPs among transport service providers, the Set of Multilaterally Agreed Equitable Principles and Rules for the Control of Restrictive Business Practices provides a useful framework. The Set was unanimously adopted in 1980 under resolution 35/63 of the General Assembly on the Set of Multilaterally Agreed Equitable Principles and Rules for the Control of Restrictive Business Practices. This instrument, which is non-binding, aims at ensuring that RBPs do not impede or negate the realization of benefits that should arise from trade liberalization, particularly those affecting the trade and development of developing countries. It sets out principles and rules to be observed by enterprises and Governments in this area, recognizes the principle of preferential or differential treatment for developing countries, particularly LDCs, and establishes institutional machinery[45] for consultations on issues in this field. The Set (paragraph E.7) provides that States should establish appropriate mechanisms at the regional and subregional levels to promote exchange of information on RBPs and on the application of national laws and policies in this area, and to assist each other to their mutual advantage regarding control of RBPs at the regional and subregional levels.[46]

77. While the Set is the only universally applicable multilateral instrument on RBPs, the Uruguay Round Agreements contain numerous competition-policy-related provisions such as in the GATS and some sectoral agreements relating to services (particularly telecommunications). Also, the Doha Ministerial Declaration, adopted by the Fourth WTO Ministerial Conference, provides that negotiations will take place on this subject after the Fifth WTO Ministerial Conference on the basis of a decision to be taken, by explicit consensus at that session, on the modalities of the negotiations. The Declaration also recognizes the need for enhanced technical assistance and capacity building for developing and least developed countries so that they may better evaluate the implications of closer multilateral cooperation for their development policies and objectives, and human and institutional development. To this end, the Ministers decided that the WTO should work in cooperation with other relevant intergovernmental organizations, including UNCTAD. The UNCTAD secretariat is therefore implementing an ongoing programme of technical support for developing countries in this area, in which it collaborates closely with the WTO secretariat.

78. The discussions on this subject in the WTO will build on the discussions of the Working Group on the Interaction between Trade and Competition Policy, which covers issues such as core principles, transparency, non-discrimination, procedural fairness and provisions on hard-

[45] The Intergovernmental Group of Experts on Competition Law and Policy.

[46] See UNCTAD/RBP/CONF/10/Rev. 2.

core cartels. A key concern in the discussions is that full account is to be taken of the needs of developing and least developed countries and appropriate flexibility provided to address them.

(d) Trade Facilitation

79. The WTO was mandated by the Singapore Ministerial Declaration to undertake exploratory and analytical work on the simplification of trade procedures in order to assess the scope for WTO rules in trade facilitation. The Doha Ministerial Declaration, in paragraph 27, mandates work on reviewing, clarifying and improving the relevant aspects of Articles V ("Freedom of Transit"), VIII ("Fees and Formalities Connected with Importation and Exportation") and X ("Publication and Administration of Trade Regulations") of the GATT 1994. Such work should also lead to the identification of the trade facilitation needs and priorities of WTO Members, in particular developing countries and LDCs. Members also committed to ensuring adequate technical assistance and support for capacity building in this area. All this work should be undertaken in the period leading up to the Fifth WTO Ministerial Conference, which would then, by explicit consensus, agree on modalities of negotiations to expedite the movement, release and clearance of goods, including goods in transit, and ensure enhanced technical assistance and capacity building in this area.

80. Apart from the GATT rules, trade facilitation activities have remained mostly the result of voluntary efforts by governmental or private sectors. Mandatory rules are still the exception. Other than in international transport conventions such as the Convention on the Contract for the International Carriage of Goods by Road (CMR) or the Uniform Rules concerning the Contract for International Carriage of Goods by Rail (CIM), which include simplified documentation requirements, most trade facilitation instruments recommend, rather than impose or require, compulsory measures.

81. This situation may change radically in the coming years, if and when trade facilitation rules become part of a compulsory legal environment for the multilateral trading system. This would constitute a major development challenge requiring a considerable effort by developing countries where trade facilitation still lags. Developing countries' major problems regarding trade facilitation relate to excessive documentation, lack of automation and insignificant use of information technology, lack of transparency and unclear import/export requirements as well as inadequate procedures, and lack of modernized institutions relating to customs clearance. Thus addressing trade facilitation issues should contribute significantly to reducing inefficiencies in such areas as customs and transport, including through simplification, rationalization and harmonization of procedures, greater transparency, and the elimination or minimization of avoidable administrative and procedural delays and costs incurred in international trade transactions.

82. Improving the efficiency of trade infrastructure and transparency, and decreasing transaction costs, discretion, and corruption are in the interest of both developing and developed countries. The key question is whether a set of rights and obligations at the multilateral level is the best way for the trading system to effectively implement trade facilitation measures. The arrangements within some RTAs can be instructive in this regard, as they have sought to harmonize various national systems. For developing countries, the approach could be one that allows them to improve trade facilitation while avoiding the loss of policy autonomy and additional institutional burden and implementation costs.

83. Whatever decision may be taken on the future negotiation of trade facilitation in the WTO, paragraph 27 of the Doha Declaration provides an opportunity to discuss issues relating to trade facilitation at a multilateral level and the need for solutions at the local level for three important aspects of trade facilitation implementation process, namely the need for: (a) efficient administrative and management processes that would not only reduce trade transaction costs, but also lead to improved governance; (b) an adequate and sustainable institutional framework that would drive the necessary changes in the area of trade facilitation; and (c) timely and concrete commitment of resources for technical and financial assistance and support for capacity building.

ANNEX

Table 1: Proportion of landlocked developing countries' trade with Quad countries (percentages)

Percentage

	Exports						Imports					
Country	**1996**	**1997**	**1998**	**1999**	**2000**	**Aver.**	**1996**	**1997**	**1998**	**1999**	**2000**	**Aver.**
Afghanistan	34.0	29.0	23.1	26.5	13.1	**25.1**	29.0	17.5	14.7	11.6	1.6	**14.9**
Armenia	19.9	15.2	12.1	12.7	14.1	**14.8**	2.8	3.4	12.8	9.2	9.6	**7.6**
Azerbaijan	14.5	6.9	11.4	9.5	16.8	**11.8**	5.9	1.5	1.6	3.8	1.6	**2.9**
Bhutan	19.2	50.8	34.9	20.8	33.1	**31.7**	0.7	7.1	9.8	3.4	3.6	**4.9**
Bolivia	33.8	20.5	20.7	20.6	18.7	**22.9**	40.0	30.7	26.6	30.8	24.4	**30.5**
Botswana					16.8	**16.8**					5.8	**5.8**
Burkina Faso	9.0	8.6	5.2	6.9	8.1	**7.5**	8.2	3.6	2.6	6.9	5.8	**5.4**
Burundi	10.5	2.2	7.2	5.0	4.9	**6.0**	2.7	16.4	12.5	14.0	18.3	**12.8**
Central African Republic	11.1	7.4	10.5	10.0	8.3	**9.4**	0.7	1.5	1.5	1.6	2.2	**1.5**
Chad	3.7	4.4	4.2	5.4	11.8	**5.9**	12.1	4.3	9.4	9.5	7.1	**8.5**
Ethiopia	23.7	20.2	14.7	21.9	23.1	**20.7**	23.9	27.4	27.4	26.3	22.7	**25.5**
Kazakhstan	13.9	6.8	3.8	7.1	4.4	**7.2**	17.3	6.3	7.1	6.4	6.7	**8.7**
Kyrgyzstan	22.7	8.5	3.9	7.4	6.2	**9.7**	6.2	1.4	0.2	0.4	1.0	**1.8**
Lao People's Democratic Rep.	30.4	21.1	20.9	4.4	4.2	**16.2**	29.8	20.5	25.0	12.3	9.8	**19.5**
Lesotho					5.0	**5.0**					83.4	**83.4**
Malawi	25.7	10.7	10.5	6.0	6.2	**11.8**	30.5	23.1	24.6	19.8	27.6	**25.1**
Mali	8.9	8.9	7.9	8.2	7.9	**8.4**	6.4	6.9	7.0	11.4	11.1	**8.6**
Mongolia	22.9	14.9	14.1	16.7	8.9	**15.5**	40.9	32.8	27.8	21.8	30.4	**30.7**
Nepal	18.3	12.2	8.4	7.4	9.9	**11.2**	34.0	30.3	33.2	34.7	38.0	**34.0**
Niger	20.1	15.3	9.7	10.9	15.3	**14.3**	14.5	18.5	1.4	4.8	2.7	**8.4**
Paraguay	42.7	25.2	24.3	22.5	18.3	**26.6**	25.5	10.5	8.2	6.6	6.1	**11.4**
Rwanda	24.4	19.9	15.9	27.5	19.8	**21.5**	15.0	4.7	7.7	10.5	9.3	**9.4**
Swaziland					19.0	**19.0**					25.4	**25.4**

Tajikistan	15.8	8.6	6.3	8.0	5.4	**8.8**	18.5	3.8	13.7	10.2	2.5	**9.7**
The Former Yugoslav Rep. of Macedonia	1.6	2.7	1.6	3.4	3.5	**2.6**	16.0	17.3	17.7	15.7	13.2	**16.0**
Turkmenistan	40.4	14.1	6.4	4.8	16.0	**16.3**	1.9	1.5	1.1	1.8	3.2	**1.9**
Uganda	18.1	11.3	9.4	10.2	9.1	**11.6**	6.1	8.6	6.3	8.2	13.1	**8.5**
Uzbekistan	19.5	8.8	9.0	22.4	10.2	**14.0**	15.4	3.1	4.3	4.2	6.1	**6.6**
Zambia	20.1	8.0	9.2	7.4	3.9	**9.7**	46.1	28.6	32.4	22.7	19.0	**29.8**
Zimbabwe	23.7	10.4	10.4	7.7	6.8	**11.8**	21.8	18.2	17.4	18.5	17.0	**18.6**
Aver.	**20.3**	**13.8**	**11.7**	**11.9**	**11.6**	**13.9**	**17.5**	**12.9**	**13.1**	**12.1**	**14.3**	**15.9**

Source: COMTRADE, UNCTAD computations.

Table 2. Landlocked countries' tariffs

(year: 2000 MFN tariffs)

	Worldwide						Quad countries					
Country	**SAvg**	**Wghtavg**	**Max_rate**	**Number of total lines**	**Number of dom. peaks**	**Number of int. peaks**	**SAvg**	**Wghtavg**	**Max_rate**	**Number of total lines**	**Number of dom. peaks**	**Number of int. peaks**
1 Afghanistan	9.75	3.33	45	1671	50	378	5.93	1.33	21	554	35	28
2 Armenia	5.71	1.77	105	1422	77	93	4.55	1.5	48	998	61	54
3 Azerbaijan	4.69	0.77	35	1729	37	56	3.7	0.61	33	1186	29	26
4 Bhutan	5.84	4.09	60	378	7	31	3.61	2.06	48	275	5	5
5 Bolivia	9.87	6.84	180	5472	197	987	5.36	2.28	38	2216	161	155
6 Botswana	5.81	0.7	40	975	45	83	4.76	0.8	33	817	43	43
7 Burkina Faso	10.15	6.39	279	2495	44	553	4.46	1.31	48	1121	33	30
8 Burundi	7.5	0.44	60	328	9	51	4.73	0.07	21	215	7	7
9 Central African Republic	10.31	0.88	350	944	15	213	3.36	0.58	350	571	10	7
10 Chad	8.91	0.69	40	664	4	159	4.02	0.08	22	364	4	4
11 Ethiopia	11.32	0.98	249	2879	30	708	3.98	0.6	31	1154	21	18
12 Kazakhstan	4.99	2.09	60	2371	38	135	3.2	0.85	58	1576	33	30
13 Kyrgyzstan	6.04	2.38	58	1059	52	66	5.09	0.27	58	527	35	35
14 Lao People's Democratic Rep.	10.45	8.44	90	1974	247	400	8.58	10.89	38	1129	154	156
15 Lesotho	11.98	10.69	40	354	61	84	10.87	10.69	33	238	54	53
16 Malawi	10.45	16.84	350	1168	56	163	5.74	17.69	350	767	41	40
17 Mali	6.16	4.2	279	1959	54	117	3.92	0.67	31	1489	24	21
18 Mongolia	10.08	5.77	350	1229	113	264	7.31	9.13	350	879	99	93
19 Nepal	9.69	9.48	114	5257	634	886	7.39	8.83	38	3186	352	331
20 Niger	7.14	3.43	279	1866	50	177	3.87	0.24	29	1272	28	26
21 Paraguay	11.21	6.11	350	4917	90	1'419	5.93	1.41	350	1443	80	89
22 Rwanda	6.14	0.69	40	500	2	34	2.97	0.34	16	298	2	2
23 Swaziland	9.65	9.09	170	2949	199	658	6.63	9.88	34	1397	178	188
24 Tajikistan	7.29	5.29	48	465	17	53	5.75	4.95	48	244	15	10
25 The Former Yugoslav Rep. of Macedonia	7.19	7.03	350	5290	394	495	6.58	7.02	350	4408	330	318

26 Turkmenistan	5.45	3.76	90	909	49	51	4.76	3.35	29	741	43	43
27 Uganda	10.43	3.35	249	2012	49	318	4.86	1.46	25	1125	37	36
28 Uzbekistan	5.94	1.78	90	1540	87	100	4.89	1.33	33	1162	59	53
29 Zambia	9.84	5.19	350	1517	41	206	5.05	2.12	350	848	13	10
30 Zimbabwe	8.85	8.27	350	5852	286	809	5.86	4.68	350	3855	235	234
Total	10.12	4.17	350	32071	1495	6621	5.62	2.85	350	12629	907	862

Source: WITS, UNCTAD computations.

Table 3. The disadvantage of landlocked countries (billion US$, current value 2000)

		Developing countries				Developed countries
		Africa	**Asia**	**America**	**Middle East**	
Landl ocked	**Export**	0.7	0.5	1.5		69.6
	GDP	3.1	2.1	7.9		149.2
	Export/GDP	0.2	0.3	0.2		0.5
Non-landlocked	**Export**	4.6	61.4	13.8	22.0	232.8
	GDP	13.22	141.5	66.6	54.7	1178.5
	Export/GDP	0.4	0.4	0.2	0.4	0.2

Source: Coulibaly and Fontagne.

Box 1. Possible impact of improved transport facilities for LLDCs

"Infrastructure - both own infrastructure and landlocked countries' transit routes - is a significant and quantitatively important determinant of transport costs and of bilateral flows. For example, improving destination infrastructure by one standard deviation reduces transport costs by an amount equivalent to a reduction of 6,500 sea Km or 1,000 Km of overland travel."

"Being a landlocked country raises transport costs by around 50% (for the median/representative landlocked country compared to the median/representative coastal economy)".

"Improving the infrastructure of landlocked economy to the 25th percentile (that is increasing the quality index by 25 percent) reduces this disadvantage by 12 percentage points, and improving the infrastructure of the transit economy by the same amount reduces the disadvantage by a further 7 percentage point."

In terms of "elasticity to trade with respect to transport costs, the median landlocked country only has 30% of the trade volume of the median coastal economy. Improving infrastructure to the 25th percentiles raises this to over 40%."

Source: N. Limao and A. Venables: Infrastructure, Geographical Disadvantage and Transport Costs. Mimeo Columbia University, The World Bank and London School of Economics.