

## Workshop Exercises



## **Exercises for FUEL and VEHICLE Taxation in African Countries**

by

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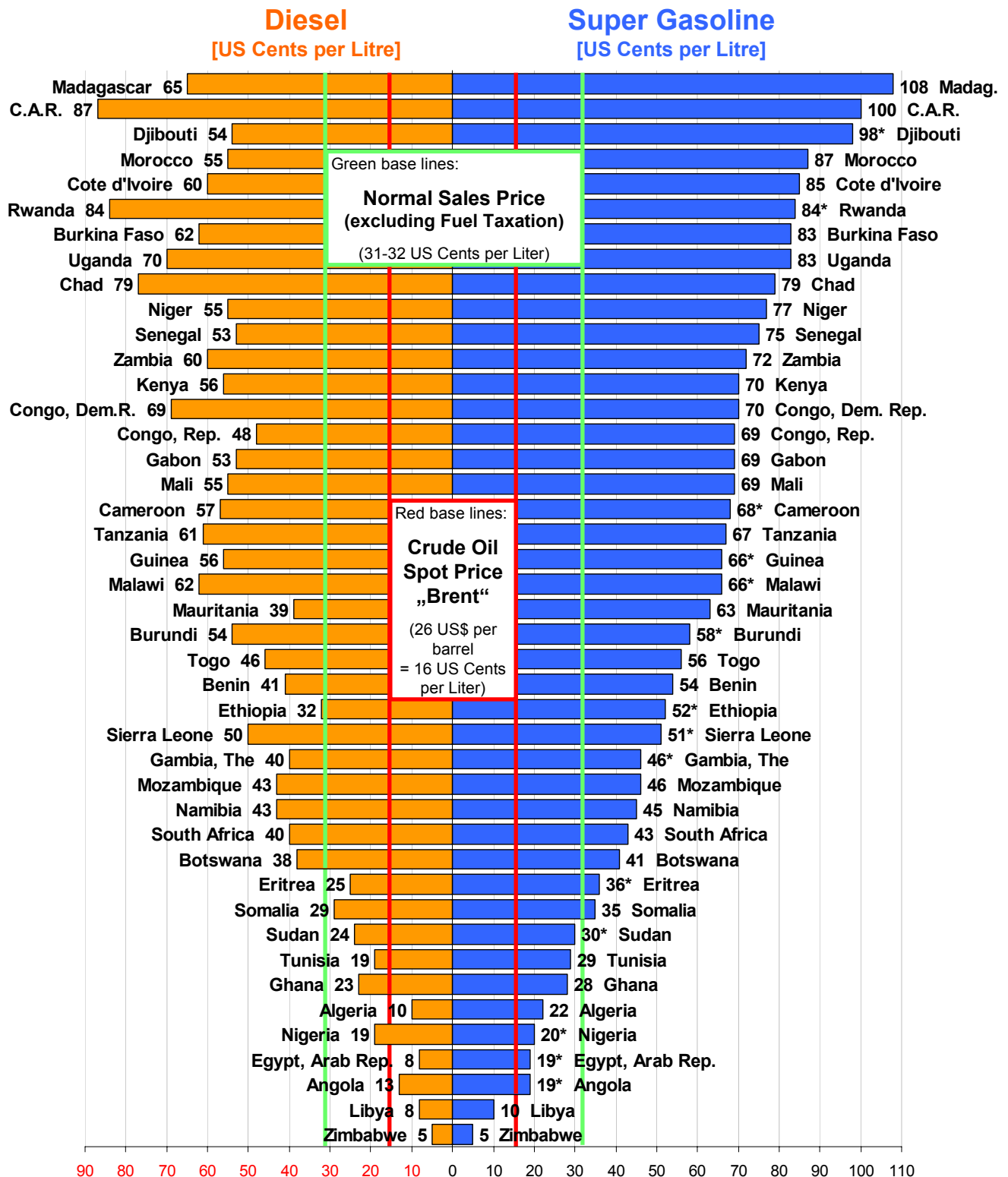
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# Comparison of Fuel Prices in Africa as of 10 December 2002



\* Normal grade gasoline, as super gasoline is not commonly available in the country

Note: The "Red Base Line" represents the world market price for crude oil (North Sea Brent) at Rotterdam port on 10<sup>th</sup> December 2002. This price is by chance roughly the average crude oil price during the year 2002.

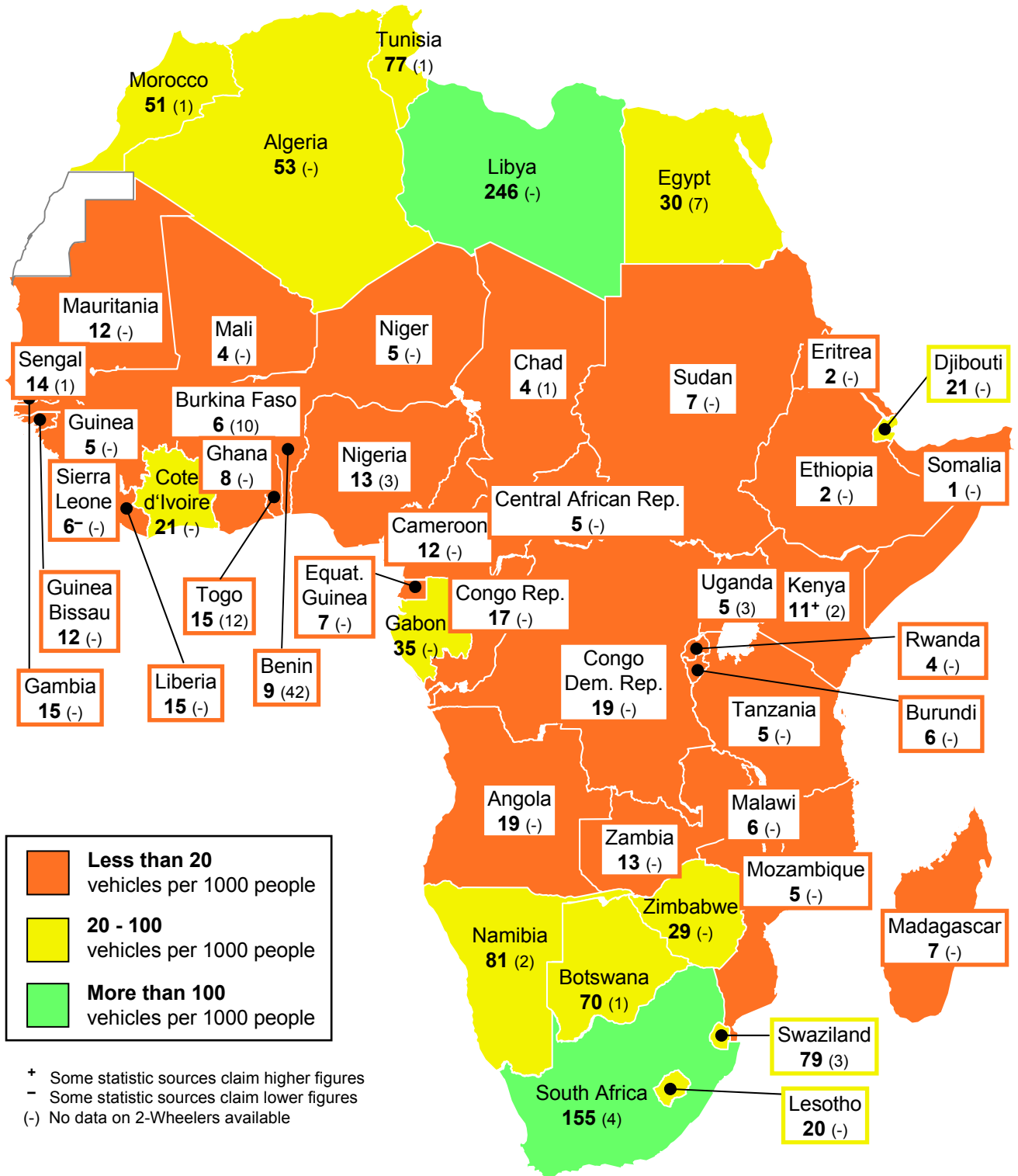
The "Green Base Line" represents the hypothetical sales price of the refined and distributed MINERAL FUEL, if it would be sold as a normal commercial good e.g. MINERAL WATER. Therefore the green line marks the border between fuel subsidy & taxation. In the case of self-producing oil-countries this green line is supposed to be valid as well: Assuming that the oil production could have been sold abroad, fuel prices are subsidised at the expense of the country's energy sector.

[Source: Metschies, gtz survey Dec. 2002]

# Motorisation in Africa



Reading Sample:  
**Motor Vehicles** → **South Africa 155 / (4)** ← **2-Wheelers**  
 per 1000 People per 1000 People



[Sources: Verkehrstaschenbuch Aral 2002/2003, World Road Statistics IRF 2002, VDA International Auto Statistics, WDI Weltbank 2001/2002]

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# Loss of Fuel Revenues

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Taxation is generally deemed an act of national sovereignty. Often, however, a comparison with the price situation in neighboring countries is left out of the internal political decisionmaking process.

The continent-by-continent fuel price tables included in chapter 6 summarize the cross-border situation. For instance, the comparison of fuel prices in Nigeria and Cameroon yields a fuel price ratio of 1 : 2. And since most developing countries' borders cannot be controlled effectively, there is an enormous potential for fuel smuggling – and that potential is being exploited.

It has been estimated that some 20 % to 50 % of all fuel consumed in Benin, Togo, Ghana, Burkina Faso, Mali, Niger, Cameroon and Chad is of non-taxed origin.<sup>6</sup>

This equates to millions of US \$ in lost national revenues, while the state budget frequently does not even suffice to pay the salaries of state employees on time (with such payments often lagging a quarter of a year behind schedule).<sup>7</sup>

The price data and other figures stated in this report provide a basis for a more detailed calculation of the effects of fuel smuggling. However, the only real remedy for the problem may lie in international agreements on harmonization of taxation levels on the basis of regional customs unions (e.g., ECOWAS and UDEAC in West and Central Africa), provided they are supported by the individual governments.

## Legal Fuel Taxation Exemptions: Farmers, Fisheries, Military & Presidency

Privileges are sought by many groups of the society. As the general trend persists to rise fuel prices, world-wide tax exemptions are granted in different fields:

- Use of diesel in the subsidized **agriculture** is often exempted from fuel tax. In European countries the distinction of agricultural use is made by colouring this special use of diesel. Nevertheless a high degree of misuse (for private diesel cars etc.) is known.
- Social reasons are brought forward, first to protect the poor. Thus for instance the small **fisheries** using gasoline in their motor-driven canoes had to be protected in the SENEGAL. Misuse had been stated, when some years later<sup>8</sup> nearly half the gasoline consumption of the country was due to fishermen needs.
- The **military** in many countries play a special role. Therefore privileges of untaxed fuel are often used and control even for private military use is missing. It may happen (MADAGASCAR 1998) that even a rural roads study cannot be executed as planned as any information on fuel sector revenues are explicitly hindered by Ministries.
- The **presidency** may execute special powers by authorizing local businessmen to direct import of fuel (as by truck from NIGERIA to BURKINA FASO) thus alleviating local shortages, or other members of the governing family (as reported from former Zaire or Mali) do so.
- Fuel tax exemptions for railways and public transport even in cases, where no fuel tax is used for the road sector, are common in many countries.

The conclusion drawn from the examples cited above is, that **exemptions even from high fuel taxes should generally not be granted** and that subsidies, if intended, should be managed by other ways, preferably by transparent direct transfers to the individual recipients.

<sup>6</sup> Ian Heggie, Managing and Financing of Roads, p. 68

<sup>7</sup> Metschies, G., Note on fuel taxation in Togo, dated Dec. 6, 1995

<sup>8</sup> Findings of an International Bank on road Sector Financing in 1982

# Tax Evasion by Lack of Government Control



Negligence and lack of government control on half-legal practices in the fuel sector may lead to substantial losses of tax revenues.

Thus the missing government order to limit the size of truck tanks to max. 200 litres may cause a revenues loss, bigger than all state expenditures for roads (see Box Poland).

Or the missing counting of control for transit fuel tankers leads to the same effect (see Box West Africa).

Or the taxation point of fuel is not centralised at the refinery, but decentralised to the fuel companies which fail to declare their full distribution of fuel (see Box Kazakhstan).

## Poland - Fuel Import undermines Transport Policy of Government<sup>9</sup>

In 2002 the Polish Fuel Distributors Association informed the Polish Government on the size of the fuel smuggle between Belarus and Poland. It estimated a yearly loss of Taxes of 570 Million Euro, as truckers enlarged their normal 200 litre tank up to 1 500 liters and sold the cheap Belarus fuel (Dieselprice of 36 US cents against 68 US cents per litre in Poland) all over Eastern Poland. The Polish government was urged to officially introduce a decree of limiting the tank size to the European limit of 200 litres<sup>10</sup> starting 1 January 2003.

This amount of lost tax revenues would have been sufficient for constructing 160 km of new motorways every year. But Budget Expenditures for all roads of the country were 582 million US\$ only (1997), out of which 40% had to be paid by foreign sources<sup>8</sup>.

## West Africa - Missing Transparency in Transit Transport and Fuel Administration

Fuel supply by over-land transport to landlocked countries is a special problem.

It may be solved as in the Cote d'Ivoire, where transit tankers to Mali and Burkina Faso were given tax exemption ("duty-free") clearances. But if the number and amount of clearance certificates is not sufficiently controlled<sup>11</sup>, tanker trucks may "vanish" or be half-unloaded on the transit way<sup>12</sup>.

Another regulation is to allow the transport of taxed fuel only. Preferably this tax should be that one of the destination country. But trucks passing to transit countries with higher local taxes may still find it profitable to sell part of their cargo underway.

In many countries fuel administration of imports is executed by parastatal bodies. Their control should be a primary concern of the Auditor General

<sup>8</sup> NEI Study on Road Transport Charges in SOE Countries, Annex 12, Dec 2000

<sup>9</sup> Vereinigung Deutscher Kraftwagenspediteure VKS, 3/2003

<sup>10</sup> The same problem was found in 1985 at the Malawi/Zambia border, when trucks with special 1000 litres tanks were put into service

<sup>11</sup> Ivory Coast 1995

<sup>12</sup> Details of illicit traffic in motor fuels in Westafrica are given in: METSCHIES/Rausch; „Financing road maintenance in Westafrica“, GTZ – Eschborn 2000, p. 163-168.

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## Tax Evasion by Lack of Government Control

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Theoretically tax collection from fuel is easy. Contrary to the Value Added Tax (VAT) not all the thousands of output sources have to be identified (like all the shops, craftsmen, factories etc. all over the country) but only the very few input places like the (often only) refinery or the import harbour. A few dozen of state officials may be sufficient.

Nevertheless experience shows that collection ratios are often low, as for instance 57% only in Kazakhstan<sup>13</sup>. That means that even the control of the few local fuel companies is inadequate. Similar situations prevail in other former CIS countries, if seats in Parliament are taken preferably by local profiteers enjoying parliamentary immunity.

To increase tax collection rates from refineries and fuel companies to 90 and 100% at short notice are in deed rewarding conditionalities by foreign donors and international banks.

But practical control is difficult and has to operate at different levels:

- at the state fuel import organisations, which lack audited annual reports and
- at the state-owned refineries, which may – as on the West-African coast – form a cooperation chain of supply reaching from Gabun, Cameroon, Nigeria up to Ghana, Ivory Coast and Sierra Leone (See Box Cote d'Ivoire)

### Cote d'Ivoire – Foreign Inspection Leakage

The lobby of profiteers is powerful and has cash at hand, even to pay the lawyers:

When conditionalities imposed on the Abidjan refinery (1997) asked for an inspection of incoming fuel ships a neutral foreign customs control company was called in. But in the conditionalities it was mentioned that the Swiss company should control only some of the incoming ships, not all of them.

<sup>13</sup> NEI Study on Road Sector Finance 2000

# Fuel Contraband



Traditions are difficult to change. This holds true for fuel smugglers also, especially in West and Central Africa, where the English-speaking countries of Nigeria, Ghana and Sierra Leone traditionally followed a low-price policy for fuel, while the neighbouring French speaking countries continued the former French high taxation policy.

## Fuel Contraband in GHANA – over 25 years of tradition

In the late 1970s in GHANA fuel prices were 3-4 times as high as in neighbouring French-speaking CFA countries. After Ghana's economic break down of 1984 this ratio improved. But Ghana's new situation as of 1991 run into difficulties as shown in the following table:

Country	1991		2002	
	Diesel Price	Gazoline Price	Diesel Price	Gasoline Price
US Cents per Litre				
Togo	66	81	46	56
Cote d'Ivoire	115	124	60	85
Burkina Faso	84	103	62	83
<b>Ghana</b>	<b>43</b>	<b>53</b>	<b>23</b>	<b>28</b>



The above table compares the situation before and after the 50 % devaluation of the CFA Franc in 1994, which lead – calculated in US \$ terms – to the above fuel price reductions in all the countries neighbouring Ghana<sup>1</sup>.

But remarkably, Ghana followed suite in dropping the local fuel prices. It dropped it even more than all the neighbouring countries cutting the sales prices from 1991 to 2002 nearly to the half. By this way the approximate brut profit margin of the contraband trade of approximately 40 US cents per litre diesel and 50 US cents per litre gasoline could be maintained throughout the years. Cross-border transport routes are well established, thus in the 1984 crisis the World's biggest cacao crop could be sold to neighbouring countries.

Comparing the 1991 situation with that one of 2002 reveals also that formerly the brut margin of contraband between Burkina and Ghana was approximately equivalent to the fuel sales price in Ghana, but in 2002 this margin equals nearly double the Ghana price. It seems that interests of the state itself dispose of no lobby and during the presidential campaign of 2001 even the Value Added Tax on fuel was abolished.

Although low fuel prices are officially defended ("special contracts with Nigeria"), the present problem is, that fuel prices are below borderline to subsidisation! This means that the former contraband tolerance of the state, which formerly draw some tax profits from the low taxed smuggled fuel, has vanished.

This situation has serious consequences to the state finances, including the financing of the formerly established Road Fund.

<sup>1</sup> Details can be found in the previous 2nd edition of Fuel Prices and VehicleTaxation, page 59

# Fuel Contraband



Experience from all over the world indicates that cross-border contraband can only be successfully opposed in the long-term by political agreements on international price harmonisation.

Theoretically an harmonisation may drive up or downwards, but practically in most cases an increase of prices may be the only solution. As political debates are driven by the self interest of the participants, detailed financially and economic studies on the profits and consequences of price harmonisation should be executed by independent consultants. In most cases all the governments involved will profit from a price harmonisation – at the expenses of private profiteers. On the basis of the data presented in the continent maps 7 countries were identified, where price harmonisations with neighbouring countries are most urgently needed.

## The 7 most urgent cases for harmonisation and fuel price adjustments

As shown on the African fuel price map there are two oil producing countries in Subsaharan Africa, whose low prices and incentives for contraband distort the neighbouring regions.

1. NIGERIA's illicit fuel export affects direct neighbours as Cameroon, Niger, Benin and also its indirect neighbours as Central African Republic, Chad, Burkina Faso, Mali and Togo. Official fuel prices in all these countries are 3 - 4 times as high as in Nigeria. Although and because fuel prices are rising in Nigeria, an international harmonisation should be reached before the Finance Ministry may profit from the contraband as well.
2. ANGOLA – after the end of civil war – experiences increased fuel smuggling into the neighbouring countries of Congo-Brazza, Congo-Kinshasa, Zambia and Namibia, where fuel prices on average are 4 times higher than in Angola. An increase of fuel prices in Angola would help also to balance the budget and lower the inflation.

In both cases all regional economies cooperation (as intended by ECOWAS, UDEAC, SADEC etc.) is stalled as long as the overdue harmonisation of the fuel prices is not in place.

As shown on the Asian fuel price map the most urgent candidates for fuel price adjustment are:

3. INDONESIA, whose subsidised fuel prices are the lowest in South and East Asia with diesel prices of half of those in India or China, and
4. RUSSIA (together with the Central Asian Republics), whose fuel prices are the lowest not only of all of European countries, but also lower than China and India.

Russia's fuel prices are one third only of those of a comparable country as Turkey.

On the American Fuel Price Map the main issues are

5. VENEZUELA with fuel prices 5 to 10 times lower than in neighbouring Colombia or Brazil, and
6. ARGENTINA with the lowest fuel prices of all its neighbours as well as
7. PERU in similar position.

As all these countries experience severe budget problems, the adjustment of fuel prices would alleviate the state deficit and contribute to non-inflationary currencies also.



# Example for Estimation of Fuel Taxation Revenues: Germany



Estimates of potential state revenues from fuel taxation are meaningful not only for the Ministry of Finance, but also for the Ministry of Transport/Public Works. Indeed, present and potential revenues from fuel taxation are practically indispensable for the sector approach generally taken by international donors and banks.

All such revenue estimates should be based on fuel consumption volumes and expressed in litres per year.

For cases in which statistical data on annual fuel consumption are restricted, unreliable or even nonexistent (holds true in many developing countries), estimates can instead be based on the number of vehicles, mileage/distance traveled per year by each type of vehicle, and average fuel consumption (e.g., per 100 km).

## Number of Vehicles

Detailed motorization figures (passenger cars and commercial vehicles) for individual countries are shown in the Annex.

## Average Annual Travel Distance per Vehicle

In Western Europe the average km travelled per year per **passenger car** is about 15,000 km per year. In Eastern Europe the travel distance is only at about 10,000 km per year. Especially for developing countries no reliable data is available. The average distance for passenger cars in countries with no reliable data was estimated at 10,000 km per year.

Western Europe USA, Japan	Average Distance travelled by a Passenger Car per year
Belgium (1998)	15 000 km
Denmark (2000)	20 000 km
Finland (1999)	18 900 km
France (2000)	14 300 km
Germany (2000)	12 100 km
Greece (2000)	15 200 km
Japan (1999)	9 800 km
Netherlands (1999)	15 400 km
Portugal (1998)	14 800 km
Sweden (2000)	14 100 km
Switzerland (2000)	13 300 km
United Kingdom (1999)	16 700 km
United States (1999)	19 100 km
<b>Average (roughly)</b>	<b>15 000 km</b>

Eastern Europe	Average Distance travelled by a Passenger Car per year
Croatia (2000)	9 900 km
Estonia (2000)	11 000 km
Poland (2000)	9 500 km
Romania (2000)	8 800 km
Slovak Rep. (1999)	7 900 km
Slovenia (2000)	9 600 km
<b>Average (roughly)</b>	<b>10 000 km</b>

Source: IRF, World Road Statistics 2002

# Workshop on Fuel Excise Taxes



Average travel distance of **commercial vehicles** in Germany is 21 400 km per year in 2002. Buses (43 700 km p.a.), small trucks (24 300 km p.a.) and big trucks (81 600 km p.a.) travel much longer annual distances. But 33.9 % of all commercial vehicles in Germany belong to the group of diverse commercial vehicles (police vehicles, ambulance, trash lorries, ...), which only travel an average of 8 000 km p.a..

Therefore the average travel distance of commercial vehicles has been assumed as 25 000 km per year.

## Fuel Consumption

Average fuel consumption for passenger cars has been estimated at a world wide average of 10 liters / 100 km and for commercial vehicles 25 liters / 100 km.

Based on these figures, the annual fuel consumption levels have been estimated.

### Calculation of Fuel Consumption: Example Germany

	A	B	C	D = A x B x C/100
Germany	Number of Vehicles <sup>1</sup> [‘000]	Average Travel Distance [km per year]	Average Fuel Consumption [litre / 100 km]	Total Fuel Consumption [1000 million litres per year]
Passenger Cars	43 772	12 100	10	53
Commercial Vehicles	4 202	21 400	25	22.5
				<b>75.4</b>

<sup>1</sup> Aral Verkehrstaschenbuch 2002/2003

# Workshop on Fuel Excise Taxes



The difference between the “*Normal Sales Price (excluding fuel tax)*” and the sales price at the service station is fuel taxation (or subsidies) – apart from minor differences in transportation costs, distribution costs and Value-Added-Tax on the untaxed sales price.

## Calculation of Fuel Tax per Litre: Example Germany

	E	F	G = E – F
Germany	<b>Sales Price (including Fuel Tax)</b> [US Cents per litre]	<b>“Normal Sales Price (excluding fuel tax)”</b> [US Cents per litre]	<b>Diesel / Gasoline Taxation</b> [US Cents per litre]
Diesel	82	31	<b>51</b>
Super	103	32	<b>71</b>

The consumption levels of Diesel and Gasoline are similar in many countries. In Germany it was exactly 50% Diesel consumption and 50% Gasoline consumption in 2000<sup>1</sup>. Lacking exact data especially in developing countries, it has been assumed that consumption of Diesel equals consumption of Gasoline.

## Calculation of Average Fuel Tax: Example Germany

	G	H
Germany	<b>Diesel/Gasoline Tax</b> [US Cents per litre]	<b>Average Fuel Taxation</b> [US Cents per litre]
Diesel	51	<b>61</b>
Super	71	

The average fuel tax per litre multiplied with the total fuel consumption yields the fuel tax revenues.

## Calculation of Fuel Tax Revenues: Example Germany

D	H	I = D x H
<b>Total Fuel Consumption</b> [1000 million litres per year]	<b>Average Fuel Tax</b> [US \$ per litre]	<b>Fuel Taxation Revenues</b> [Billion US\$]
75.4	0.61	<b>46</b>

<sup>1</sup> Aral Verkehrstaschenbuch 2002/2003

# Workshop on Fuel Excise Taxes



As it is difficult to judge a number on its own, an adequate relation has to be used to come to a meaningful statement.

Therefore the fuel taxation revenues are presented in relation to the total government tax revenues.

## Fuel Taxation Revenues as % of Government Tax Revenues: Example Germany

I	J	K = I / J
<b>Fuel Taxation Revenues</b>	<b>Total Government Tax Revenues Germany 2002<sup>1</sup></b>	<b>Fuel Taxation Revenues in Percent of Government Tax Revenues</b>
[Billion US\$]	[Billion US\$]	
46	436	~ 10.5 %

### Conclusion:

Although there are many uncertainties in each figure, variations tend to erase each other. In the example of Germany, the calculated fuel tax revenues of 10.5 % is very close to the real 10.1 % of fuel tax revenues in Germany's 2002 budget.

## Impact of a Potential Fuel Price Increase of 10 US Cents/Liter as % of Government Tax Revenues

The total fuel consumption of a country is to be multiplied with 0.1 US \$ to yield the potential revenue increase. This has been set in relation to the government tax revenues.

## Potential Fuel Price Increase of 10 US Cents/Liter: Example Germany

D	K	L = D x K	J	M = L / J
<b>Total Fuel Consumption</b>	<b>Additional Fuel Tax</b>	<b>Potential Fuel Taxation Revenues</b>	<b>Total Government Tax Revenues Germany 2002<sup>1</sup></b>	<b>Potential Fuel Price Increase of 10 US Cents/Liter as % of Government Tax Revenues</b>
[1000 million litres per year]	[US \$ per litre]	[Billion US\$]	[Billion US\$]	
75.4	0.1	7.5	436	~ 2 %

<sup>1</sup> German Ministry of Finance 2002

# Estimation of Fuel Taxation Revenues African Countries



	A	B	C	D	E = AxBx0.1+CxDx0.25	F	G = E x F	H = E x 0.1
	Passenger Cars		Commercial Vehicles			Average***	Estimated Fuel Taxation Revenues	Potential Revenues from additional Taxation of 10 US Cents / litre
Country Name	Number ['000] 2000	Average Annual Travel Distance [km]	Number ['000] 2000	Average Annual Travel Distance [km]	Total Fuel** Consumption [million litres per year]	Fuel Taxation [US cents per litre]	[million US \$ per year]	[million US \$ per year]
Algeria	1186*	10000	395*	25000	3655	-16	-566	365
Angola	216	10000	26	25000	379	-16	-59	38
Benin	42	10000	13	25000	123	16	20	12
Botswana	84*	10000	28*	25000	259	8	21	26
Burkina Faso	51	10000	15	25000	145	41	59	15
Burundi	31*	10000	10*	25000	94	25	23	9
Cameroon	134*	10000	45*	25000	415	31	129	42
Cape Verde	4	10000	1	25000	10	18	2	1
Central African Republic	13*	10000	5*	25000	44	62	27	4
Chad	24*	10000	8*	25000	74	47	34	7
Congo, Dem. Rep.	720*	10000	240*	25000	2220	38	844	222
Congo, Rep.	41	10000	14	25000	129	27	35	13
Cote d'Ivoire	246*	10000	82*	25000	759	41	311	76
Djibouti	10	10000	3	25000	29	45	13	3
Egypt, Arab Rep.	1482	10000	442	25000	4245	-18	-764	424
Eritrea	6	10000	0	25000	6	-1	0	1
Ethiopia	77*	10000	26*	25000	240	11	25	24
Gabon	34*	10000	11*	25000	103	30	30	10
Gambia, The	14*	10000	5*	25000	45	12	5	5
Ghana	113	10000	38	25000	351	-6	-21	35
Guinea	29*	10000	10*	25000	92	30	27	9
Kenya	245	10000	97	25000	851	32	268	85
Lesotho	31*	10000	10*	25000	94	17	16	9
Libya	922	10000	307	25000	2841	-23	-639	284
Madagascar	86*	10000	29*	25000	267	55	147	27
Malawi	47*	10000	16*	25000	147	33	48	15
Mali	37*	10000	12*	25000	112	31	34	11
Mauritania	25	10000	8	25000	75	20	15	8
Morocco	1162	10000	317	25000	3143	40	1242	314
Mozambique	61*	10000	20*	25000	186	13	24	19
Namibia	109*	10000	36*	25000	334	13	42	33
Niger	40	10000	16	25000	140	35	48	14
Nigeria	1196*	10000	399*	25000	3690	-12	-443	369
Rwanda	25*	10000	9*	25000	81	53	43	8
Senegal	101	10000	34	25000	314	33	102	31
Sierra Leone	22	10000	7	25000	66	19	12	7
Somalia	5*	10000	2*	25000	18	0	0	2
South Africa	4991*	10000	1664*	25000	15391	10	1539	1.539
Sudan	172*	10000	57*	25000	528	-5	-24	53
Swaziland	53*	10000	18*	25000	166	14	23	17
Tanzania	122*	10000	41*	25000	378	33	123	38
Togo	58*	10000	19*	25000	177	20	34	18
Tunisia	577	10000	192	25000	1777	-8	-133	178
Uganda	89*	10000	30*	25000	277	45	124	28
Zambia	97*	10000	32*	25000	297	35	102	30
Zimbabwe	326	10000	50	25000	639	-27	-169	64

\* Number of Commercial Vehicles has been limited to 25% of all vehicles to minimize the influence of passenger cars classified as commercial vehicles. Exceeding numbers have been added to passenger cars.

\*\* Specific average fuel consumption: passenger cars 10 litres / 100km; commercial vehicles 25 litres / 100 km

\*\*\* Taxation is taken from the graphs in chapter 3.5 and 3.6 as difference between present sales price and Normal Sales Price (borderline between taxation and subsidy). The average of gasoline and diesel taxation has been applied.

[Sources: IRF World Road Statistics 2002; Worldbank 2000, Africa Transport Technical Note no. 30; Aral Verkehrstaschenbuch 2002/2003]

# Total Government Tax Revenues African Countries



Country Name	Currency of Tax Revenues	Consolidated Government Tax Revenues in [million lokal currency]	most recent Fiscal Year available at IMF**	Fiscal Year Ending ***	Average Fiscal Year Exchange Rate 1 US \$ =	Consolidated Central Government Tax Revenues [million US \$]
Algeria	Algerian Dinar	1.354.627	2001	Dec 31	78,96	17.156
Botswana	Pula	2.407	1997	Mar 31	3,50	688
Burkina Faso	CFA Fr	68.857	1992	Dec 31	283,16	243
Cameroon	CFA Fr	690.990	1999	Jun 30	588,52	1.174
Congo, Dem. Rep.	Congo Fr	61.420	2001	Dec 31	312,0*	197
Congo, Rep.	CFA Fr	215.400	2001	Dec 31	741,47	291
Cote d'Ivoire	CFA Fr	1.287.000	2001	Dec 31	730,34	1.762
Egypt, Arab Rep.	Egyptian Pound	42.450	1997	Jun 30	3,40	12.478
Ethiopia	Ethiopian Birr	6.296	1999	Jul 7	7,42	849
Gambia, The	Dalasi	744	1993	Jun 30		
Ghana	Cedi	509.152	1993	Dec 31	649,06	784
Guinea	Guinea Fr	537.951	1999	Dec 31	1.341,66	401
Kenya	Kenya Shilling	146.509	1998	Jun 30	62,07	2.360
Lesotho	Maloti	1.693	1999	Mar 31	5,79	293
Madagascar	Madagaskar Fr	2.972.000	2000	Dec 31	6.616,27	449
Morocco	Dirham	86.440	1999	Dec 31	9,81	8.811
Namibia	Dollar	7.115	2001	Mar 31	7,35	968
Rwanda	Rwanda Fr	25.274	1992	Dec 31	133,35	190
Senegal	CFA Fr	576.200	2001	Dec 31	730,34	789
Sierra Leone	Leone	82.337	1999	Dec 31	897,47	92
South Africa	Rand	258.561	2002	Mar 31	9,54	27.111
Swaziland	Emalangeneni	2.572	2001	Mar 31	7,13	361
Tunisia	Tunisian Dinar	6.946	2000	Dec 31	1,37	5.061
Uganda	Uganda New Shilling	1.072.900	2001	Jun 30	1.784,35	601
Zambia	Zambian Kwacha	1.378.300	1999	Dec 31	2.513,19	548
Zimbabwe	Zimbabwe \$	26.914	1997	Jun 30	10,79	2.495

\* Average Exchange Rate of Nov/Dec of the concerned fiscal year has been used

\*\* International Monetary Fund, Government Finance Statistics Yearbook 2002

\*\*\* The concerned fiscal year ends at the specified date in the year mentioned in the neighbouring column

[Sources: IMF Government Finance Statistics Yearbook 2002; Oanda.com Exchange Rate Services]



## Calculations by the Participants