



FUEL Taxation
*-for Road and State financing –
-and
VEHICLE TAXATION*
- for urban roads and schools -

in AFRICAN Countries

KIGALI, RWANDA, MAY 25TH– 30TH 2003

Gerhard P. Metschies
gerhard.metschies@gtz.de



Bundesministerium für
wirtschaftliche Zusammenarbeit
und Entwicklung

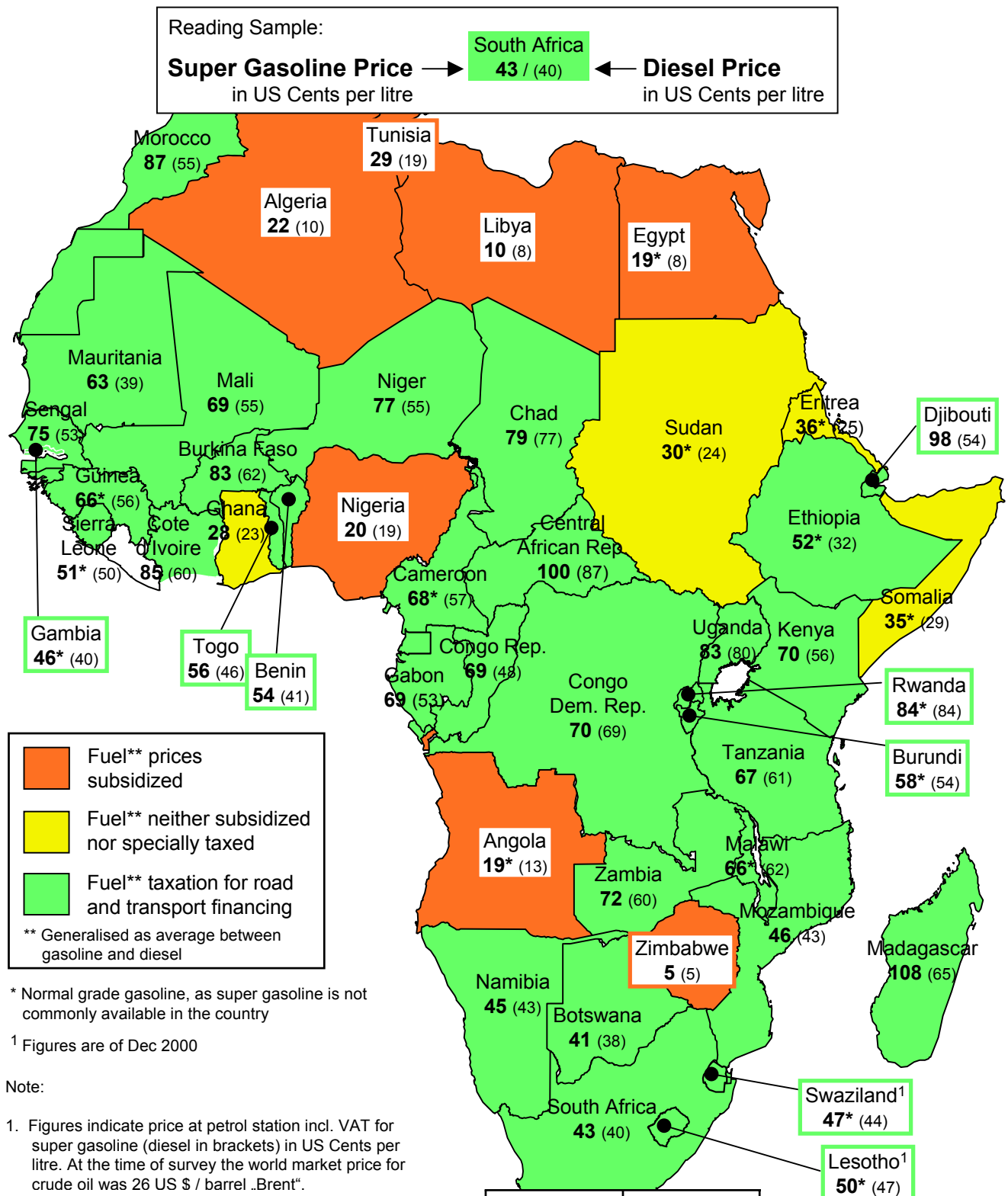


German Technical Cooperation

Why fuel taxes are so important?

- Detailed studies reveal that an average of
10 US cent
per liter Gasoline and Diesel
are
necessary to finance the
maintenance of the road network
under normal circumstances.
- Even the **Rural Roads**
can be financed
by **2 to 3 US cents**
per litre fuel (mostly administered
within a Road Fund with 20% to
30 % of the total expenditures).

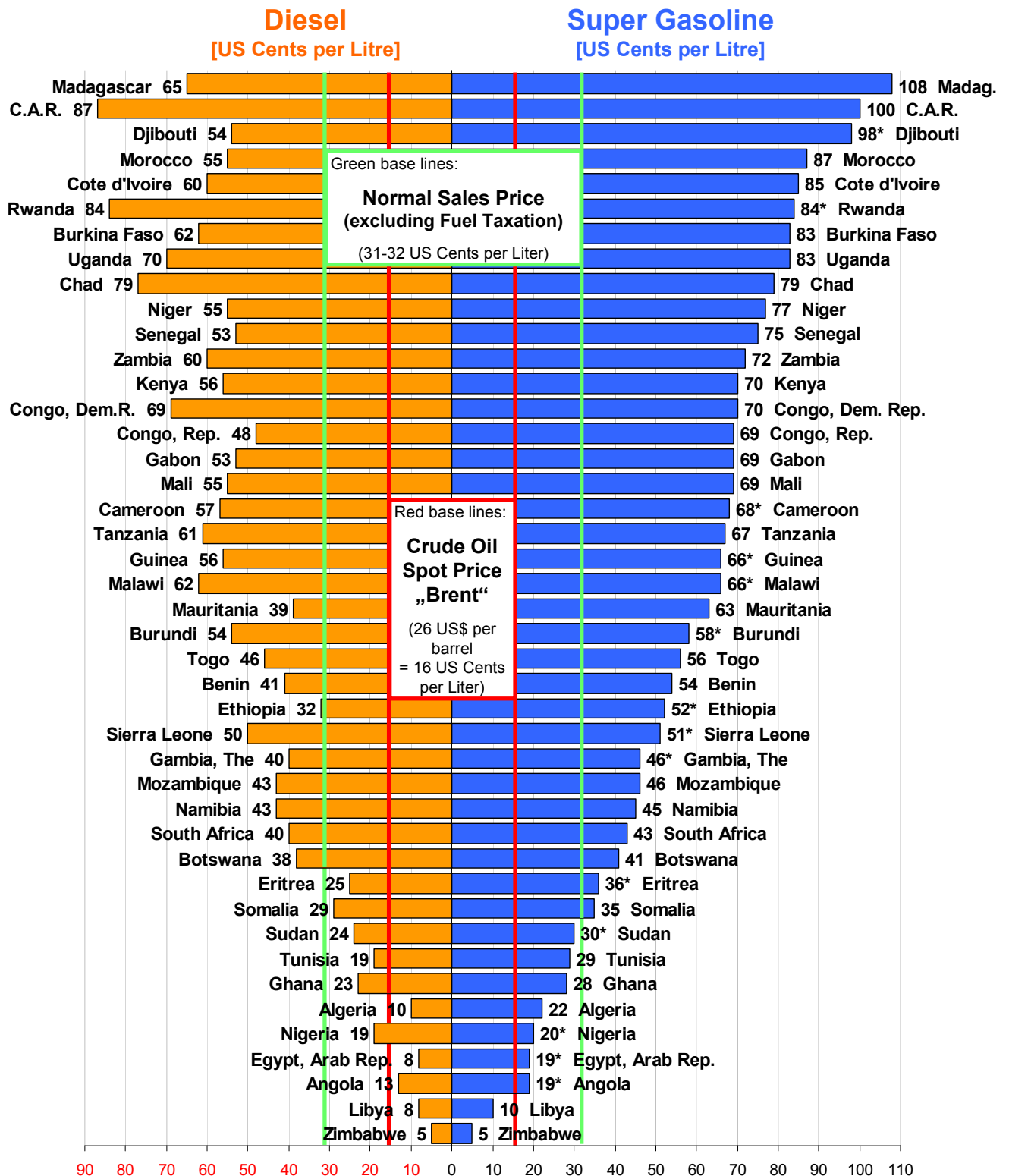
3.1 Fuel Prices in Africa as of 10 December 2002



	Diesel US Cents per litre	Super Gasoline US Cents per litre
Crude oil price (26 US\$ / 159 litre)	16	16
+ Refinery and distribution costs; Industry and dealer margins	10 – 12	11 – 13
+ Value Added Tax of 10 – 20 % for the Normal Sales Price	3 – 6	3 – 6
= “Normal Sales Price (excluding fuel taxation)”	31 (29 – 34)	32 (30 – 35)

[Source: Metschies, gtz survey Dec. 2002]

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



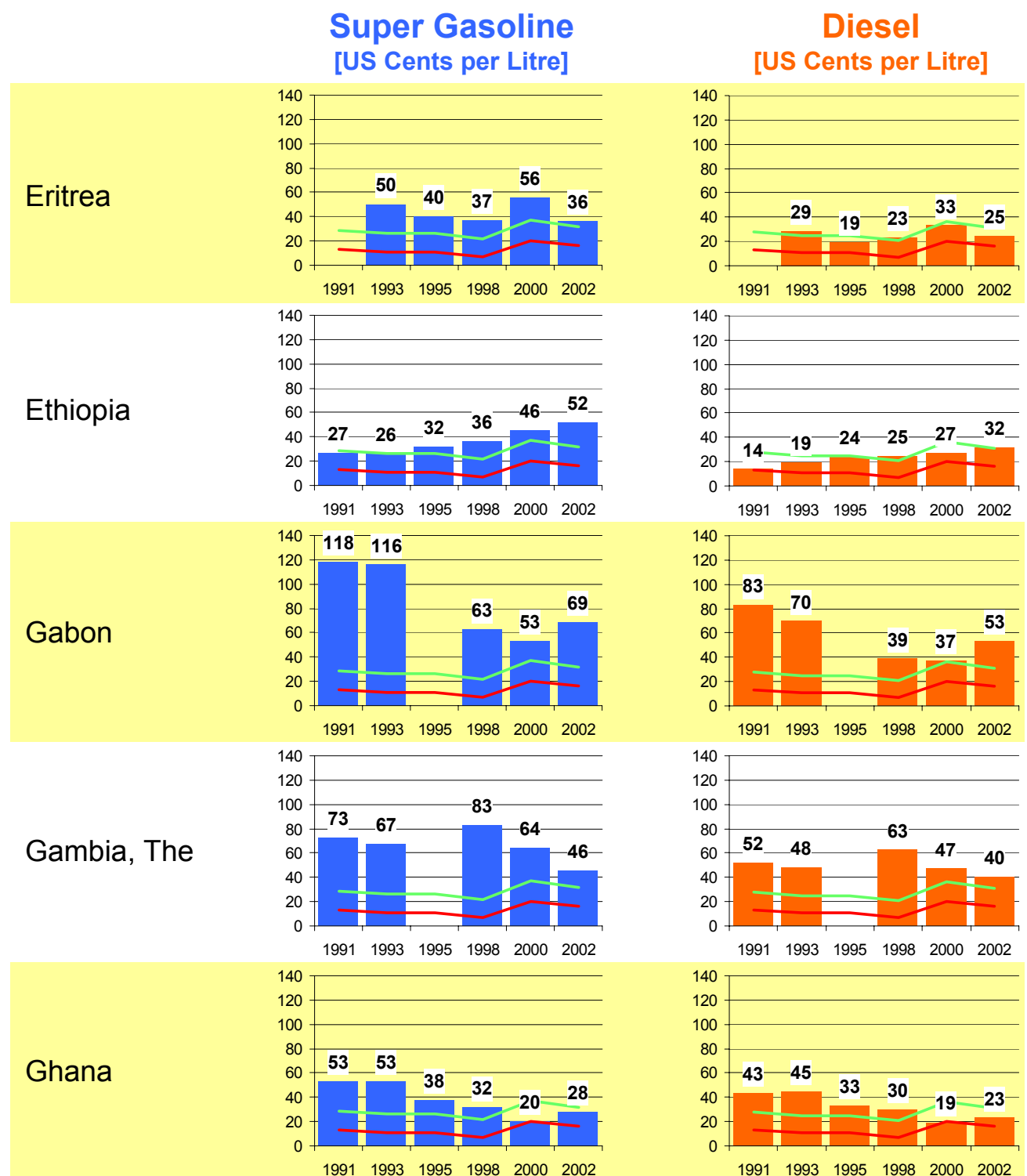
* Normal grade gasoline, as super gasoline is not commonly available in the country

Note: The "Red Base Line" represents the world market price for crude oil (North Sea Brent) at Rotterdam port on 10th 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]

3.1.3 Detailed Time Series of Fuel Prices in Africa 1991 – 2002 (from Eritrea to Ghana)



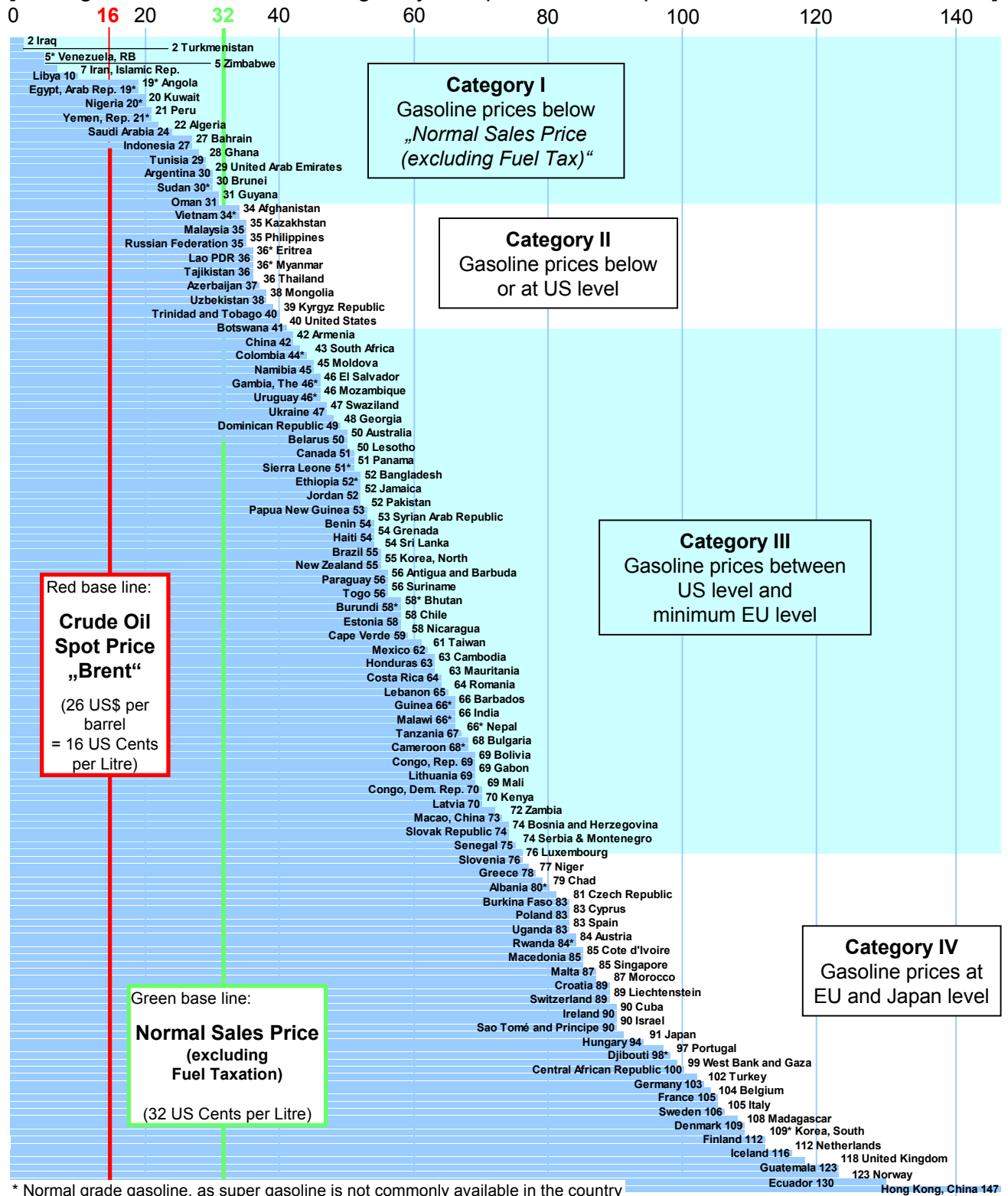
- The “Red Base Line” represents the world market price for crude oil (North Sea Brent) at Rotterdam port at time of survey.
- The “Green Base Line” represents the hypothetical “Normal Sales Price” of the refined and distributed MINERAL FUEL, if it would be sold as a normal commercial good e.g. MINERAL WATER. Therefore the green line marks the border between fuel subsidy and fuel 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.

Note: The graphs above show actual prices paid

[Sources: GTZ Fuel Price Surveys, 1991, 1993, 1995, 1998, 2000, 2002]

3.5.2 Super Gasoline Prices in 165 Countries as of 10 December 2002

[Average Consumer Prices at Highway Pump in US Cents per Liter for SUPER GASOLINE]



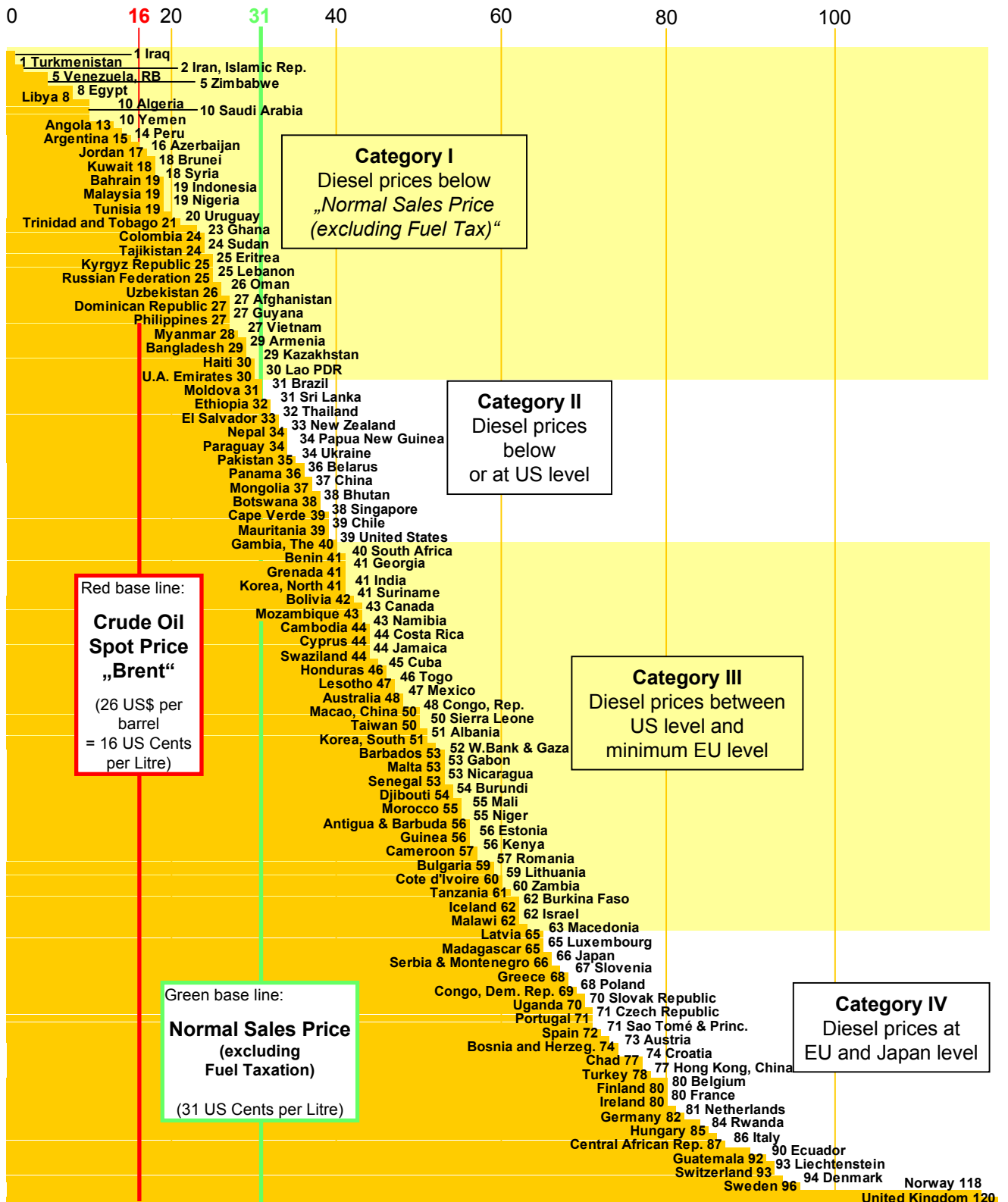
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[Source: Metschies, gtz survey Dec. 2002]

Diesel Prices in 165 Countries as of 10 December 2002

[Average Consumer Prices at Highway Pump in US Cents per litre for DIESEL]



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[Source: Metschies, gtz survey Dec. 2002]

Different Fuel Policy of Oil EXPORTERS – NORWAY and TURKMENISTAN

	inhabitants	Surface area	Gazoline price	Diesel price
Turkmeni- stan	4.5 million	488 000 sq km	2 US cents	1 US cent
Norway	4.8 million	324 000 sq km	123 UScents	118 US cents

Fuel Policy of Oil Importers – CUBA and ZIMBABWE

With the breakdown of the central command economy in Eastern Europe and the dissolution of the Council for Mutual Economic Assistance COMECON⁴ in June 1991 all countries – including member states as Cuba, Mongolia and Vietnam – had to follow the principles of the market economy based on world market prices and on convertible currencies. This holds true specifically for the oil sector.

The Cuban solution is to transfer the new conditions from the government to the consumer, i.e. to ask the cuban individual consumer to **pay his petrol in foreign currency (US \$)**

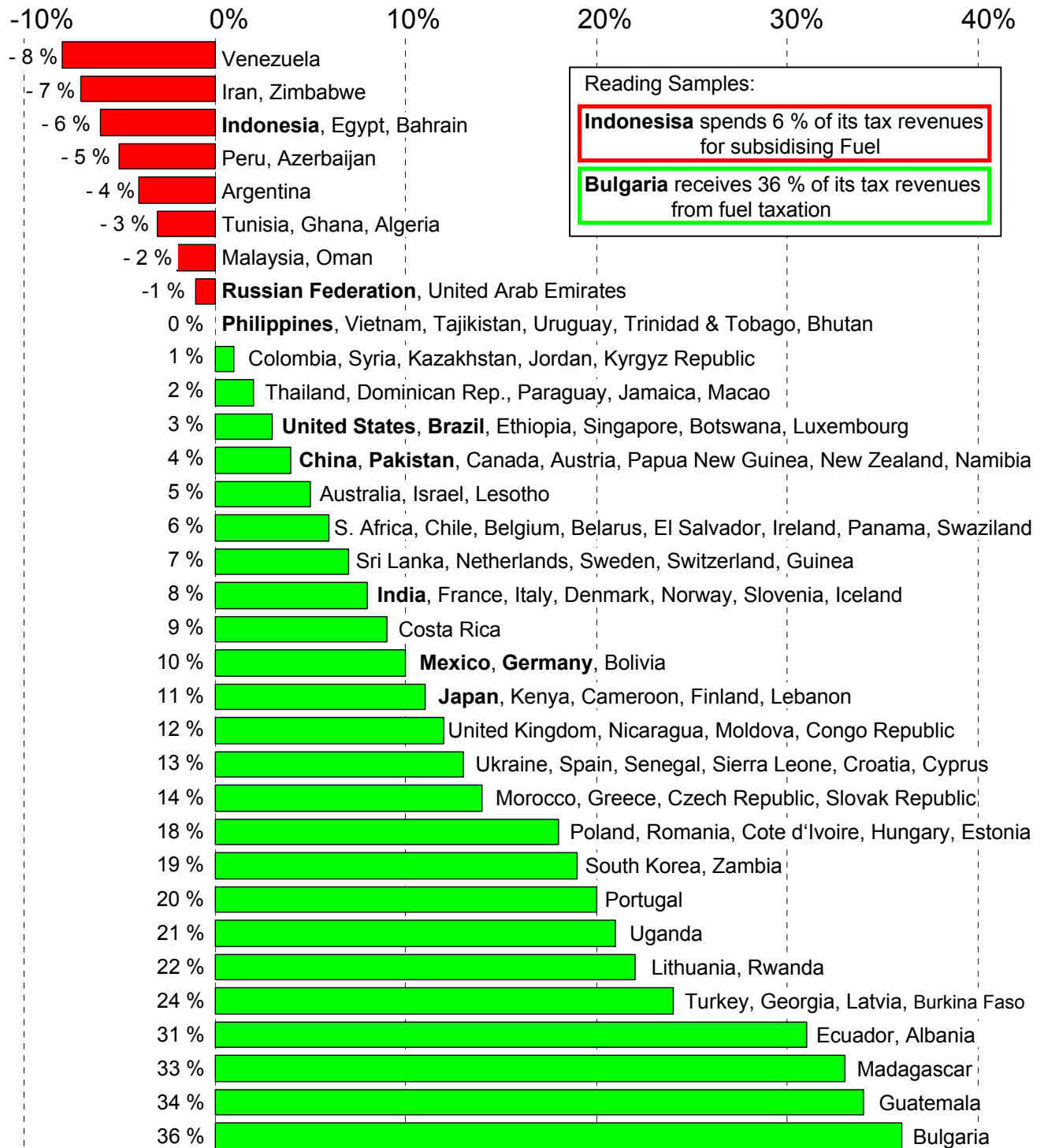
at all filling stations in the country (**gazoline for 90 US cents and diesel 45 cents**). This is a viable solution, similar to the practice in many developing countries to pay all flight tickets even locally in US \$. Thus the procurement of foreign currency (from what sources whatsoever) remains the task of the consumer.

The other solution is that of Zimbabwe. At the exchange rate of the parallel market, which indicates the real situation in the long run everywhere, **petrol sells in Zimbabwe at 5 US cents only per litre.**

The import of fuel was calculated at the tremendously **overvalued local currency exchange rate** and the consumer is benefiting the purchase of petrol at the “artificially” low prices: The incentive to smuggle it to neighbouring Zambia (with a litre price of 72 cents) is evident and the break-down of the system only a question of time.

4.3.1 Fuel Contribution to Total Tax Revenues in 110 Countries

[Calculated Transport Fuel Taxation as % of Total Tax Revenues*]



Note: Current fuel taxation revenues have been calculated with a fuel consumption of 10 liter/100km for a passenger car and 25 liter/100km for a commercial vehicle. The average annual travel distance of passenger cars has been estimated at 10.000 km per year, if exact data are not available. The average annual travel distance for commercial vehicles has been estimated at 25.000 km per year (average of pick-up, truck and public service vehicles). Fuel taxation per litre has been estimated at sales price of 10th Dec. 2002 minus „Normal Sales Price (excluding fuel taxation)“. See calculations on the following pages.

* Most recently available consolidated central government tax revenues from the International Monetary Fund are used. Currencies have been converted using the average exchange rate of the concerned fiscal year

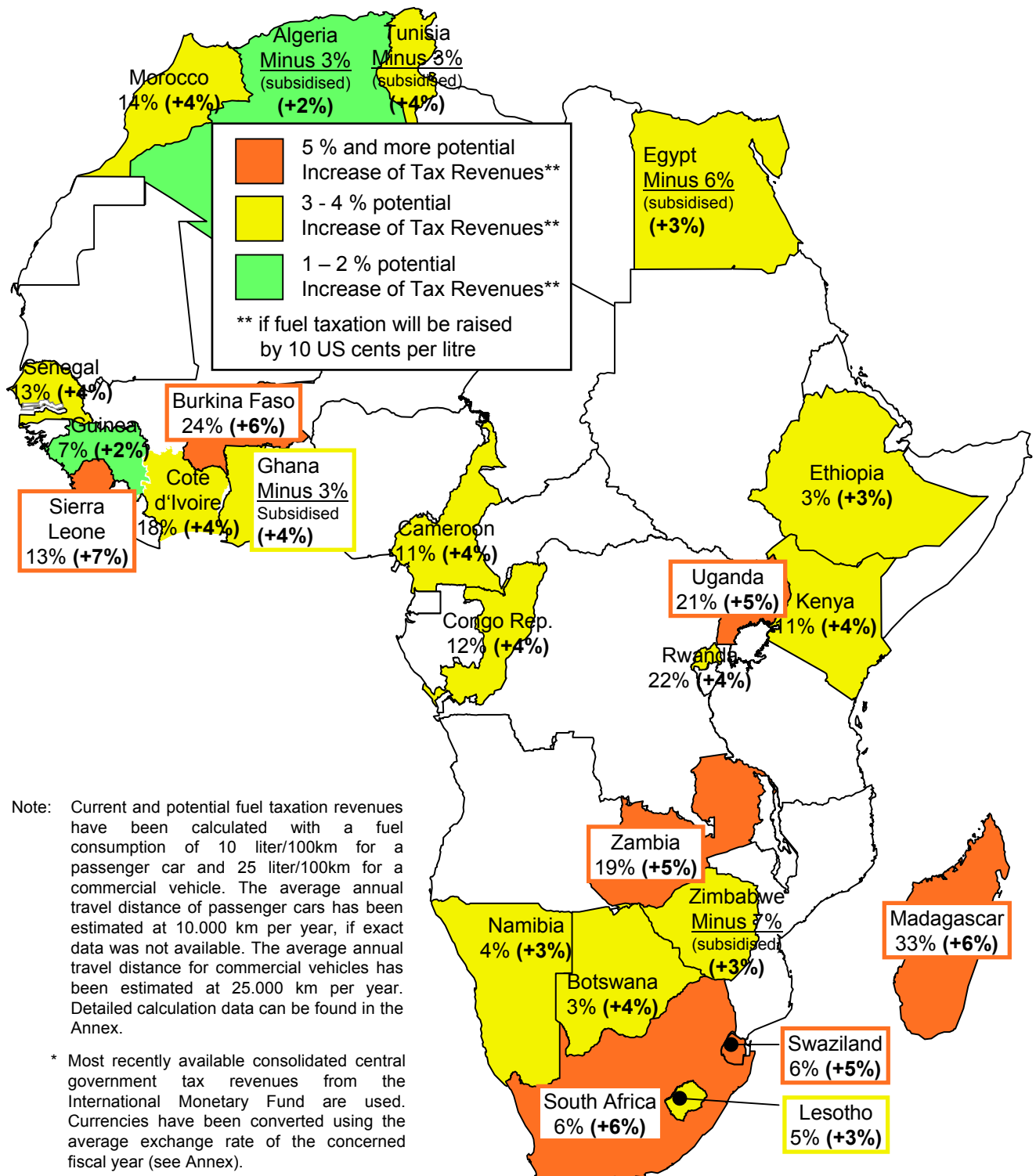
[Sources: Verkehrstaschenbuch Aral 2002/2003, World Road Statistics IRF 2002, IMF Government Finance Statistics Yearbook 2002, Consultants Calculations]

4.3.2 Africa's Fuel Taxation Revenues

+ Impact of a Fuel Price Increase of 10 US Cents/litre

Reading Sample:

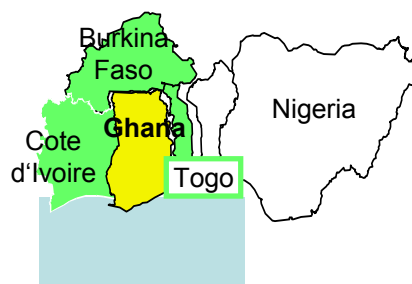
Existing Fuel Subsidies → **Egypt** **Minus 6% (+3%)** ← **Impact of a potential Tax Increase**
 represents 14% of all Tax Revenues* (subsidised) of 10 US Cents/Litre represents 4 % of all Tax Rev.*



[Source: Verkehrstaschenbuch Aral 2002/2003, World Road Statistics IRF 2002, IMF Government Finance Statistics Yearbook 2002, World Bank World Economic Indicators 2003]

Missing Fuel Harmonisation in GHANA

In the late 1970s in GHANA fuel prices were 3-4 times as high as in neighboring 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
Ghana	43	53	23	28

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

1. NIGERIA's illicit fuel export affects direct neighbours as Cameroon, Niger, Benin and also its indirect neighbors 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 harmonization should be reached before the Finance Ministry may profit from it as well.

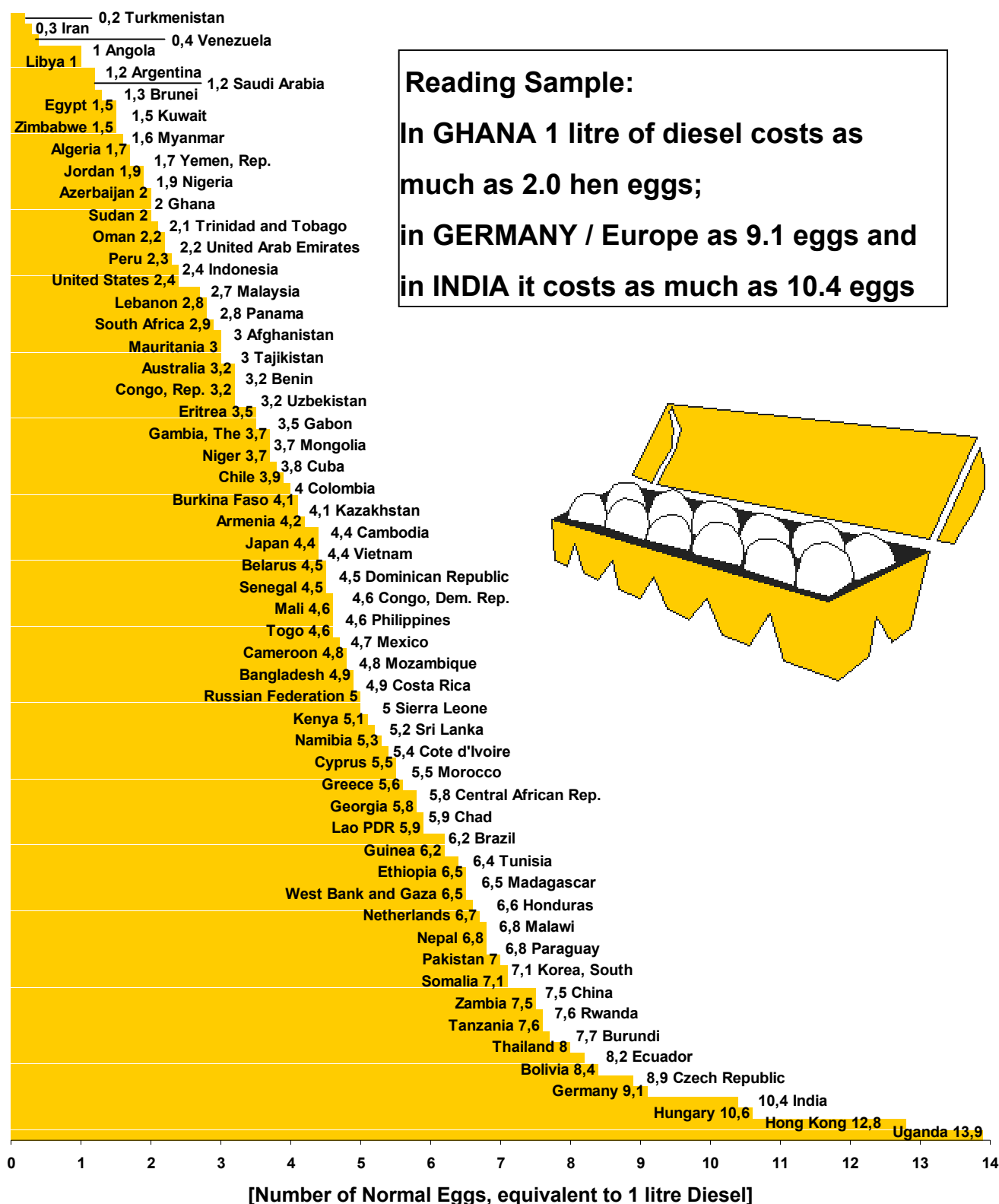
2. ANGOLA – after the end of civil war – experiences increased fuel smuggling into the neighbouring countries of Congo-Brazza, Congo-Kinshasa, Zambia and Namibia,

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.

3. GHANA – a long-standing tradition has to be given up, as low fuel prices destabilize all the neighbors budgets

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

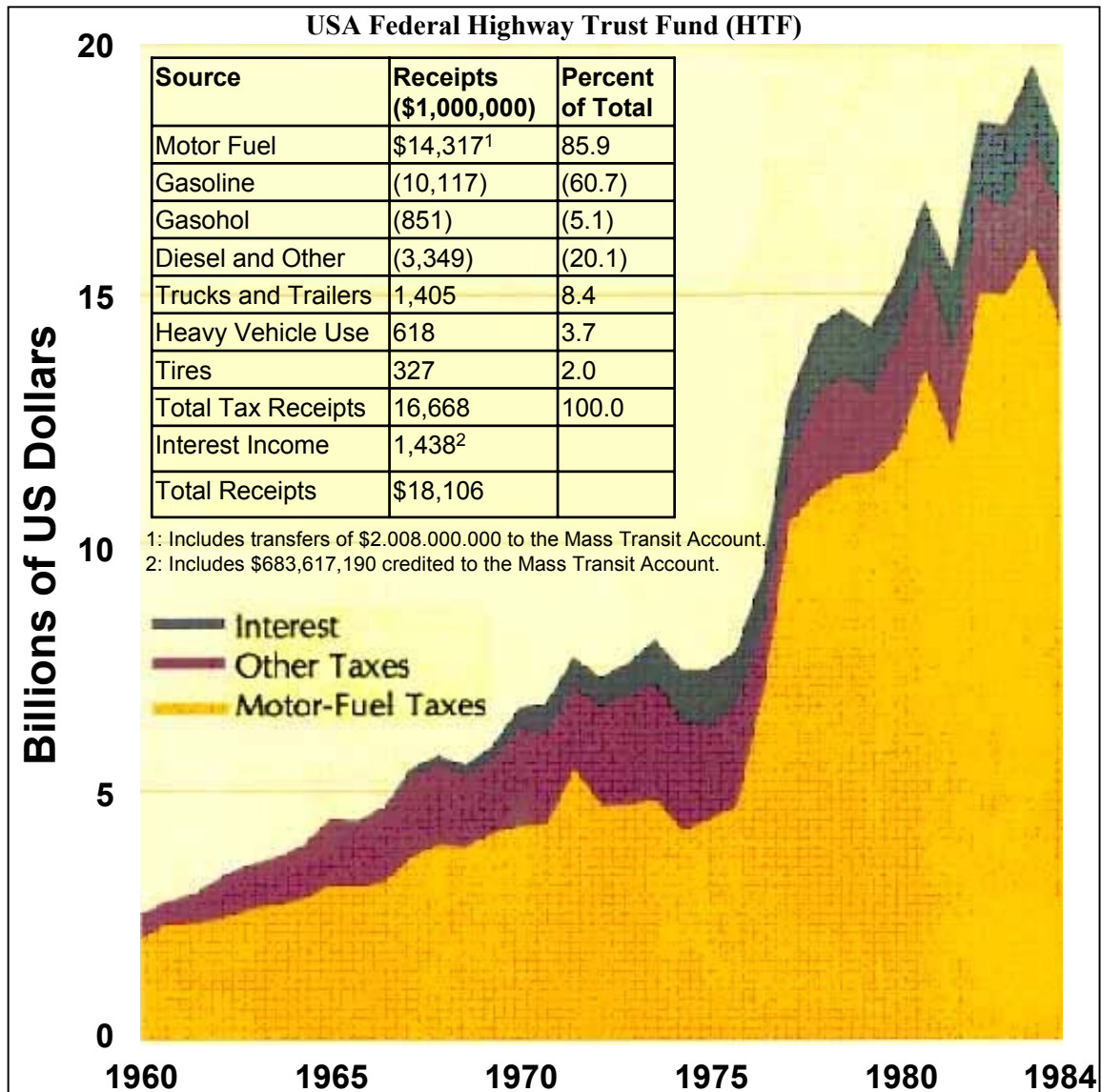
6.3 Diesel Prices in Egg Equivalents as of 10th Dec 2002



Note: The „normal egg“ is calculated as the average of small and big hen eggs.
No special-priced eco eggs are considered.

[Source: Metschies, gtz survey Dec. 2002]

Financing the National Roads nearly exclusively out of Fuel Taxes



(from: FHWA, "Our National Highways", Washington 1998)

Most receipts from the Federal taxation of motor fuel, along with a number of other Highway-related taxes, are deposited in the Federal Highway Trust Fund. The Trust Fund is made up of two accounts – highway and mass transit – and is dedicated for the funding of Federal surface transportation programs. In this way, taxes on highway users are used to fund highway facilities. The Trust Fund has provided a stable funding source for highway programs since it was established in 1956.

2. ANNUAL VEHICLE TAXATION

The annual vehicle taxation is the second main source for revenues from the transport sector.

It may be collected monthly or annually. Often it is collected as a property tax rising in line with the value of the car, or with the cubic centimeters of the engine or the horsepower of the vehicle. Here a distinction between passenger cars, which use the road SPACE mostly in towns and the heavy vehicles causing DAMAGE by destroying the the main road network should be made.

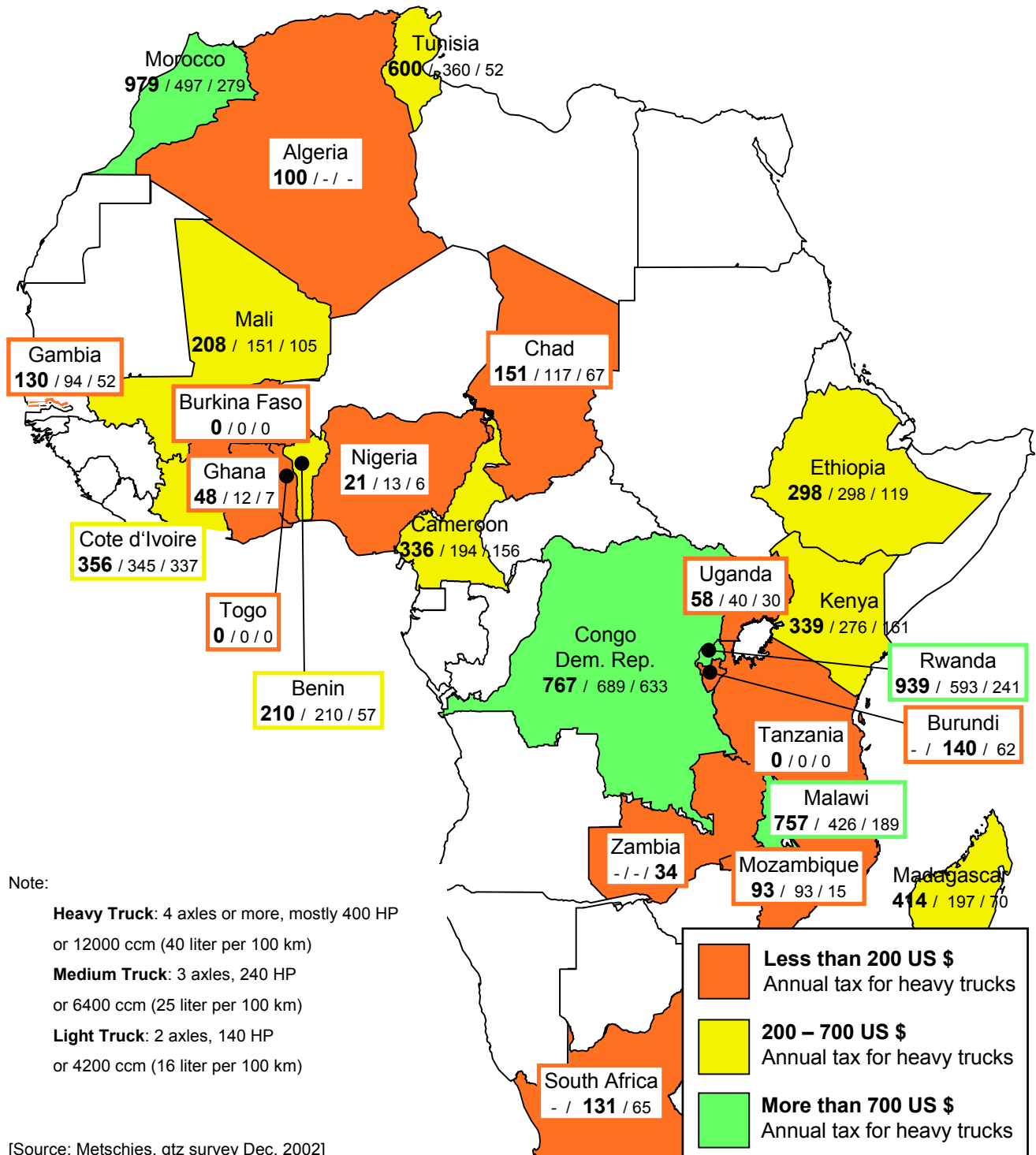
2.1 Annual Taxation for heavy vehicles

- **Annual Vehicle tax on HEAVY TRUCKS (using the maximum axle load of 10 tons) should be levied according to the damage they cause to the road increasing by the 4th power of the axle load. (Acc. to AASHOO Road Test)**
- **Therefore a 36 ton truck -trailer may be charged 20 times as much than a 10 ton truck and not only 3 or 4 times as it is mostly the case.**
- **Up to now nearly no African country realised this fact – with the exeption of Tunesia which is charging 12 times as much for heavy trucks compared with light trucks.**
- **This restructuring of heavy vehicle taxation according to “the user- pays- the- damage –principle“ is overdue in all the African countries.**

2.1 Truck Taxation in Africa

Taxes on Trucks in US \$ per Year

Reading Sample	Heavy Trucks (32 tons or more Gross Vehicle Weight) Annual Taxes in US\$	Medium Trucks (about 18 tons Gross Vehicle Weight) Annual Taxes in US\$	Light Trucks (about 8 tons Gross Vehicle Weight) Annual Taxes in US\$
Morocco	979	497	279



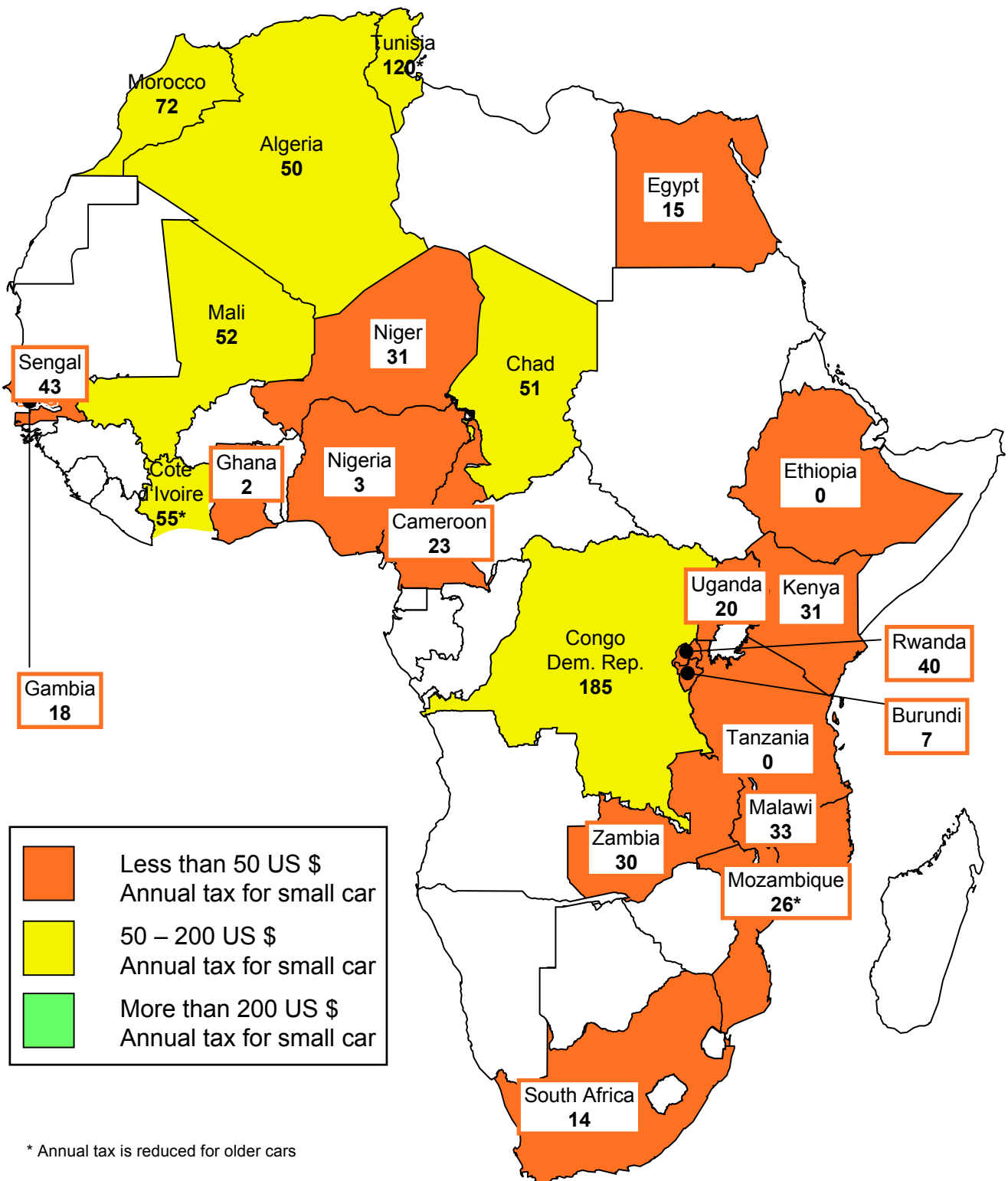
[Source: Metschies, gtz survey Dec. 2002]

2.2 Annual Vehicle Taxation on passenger cars

- As most of the passenger cars are used in the cities anyway, taxation of passenger cars - based on the road user principle - may pay for the space the use on urban roads.
- But nowadays - as the GTZ study on passencar taxation revealed – the car taxation in African countries is very low. In some countries like Gahna or Tanzania and Ethiopia it is nearly zero, while in Tunesia only 120 US \$ per year (10 \$ per month) are levied.
- The car taxation in Africa (compared with 140 US \$ p.a. in Greese, Italy and Turkey) is often less than 10 to 30 % of that required – in comparison also with the price of the vehicle..
- Here also detailed studies are recommended, on order to find a stable source of finance for the urban roads in Africa.

Passenger Car Taxation in Africa

Taxation of Small Passenger Car in US\$ p.a.



[Source: Metschies, gtz survey Dec. 2002]

Annual Taxation for Passenger Cars

Based on a comparative study by DEXIA on urban revenues in former Eastern Block countries, a GTZ-study on urban road financing in a Central Asian Republic showed, that the maintenance of Urban Roads can indeed be financed by an annual vehicle tax, if it is earmarked for the urban roads. Moreover it may be possible to finance other social obligations of the cities as elementary schools by the same tax also.

- **If annual taxes on passenger cars at a sustainable level of 6 to 16 \$ per car per month or 75 – 200 US \$ per year, are paid in urban areas,**
- **50 % could be used for maintaining urban roads and**
- **50% for the local urban elementary school sector**
- **Thus financing and building urban roads and schools at the same time out of this stable source of funds - as the vehicle taxation - may be the best way to help the poor.**

Thank you for listening.