Environmental Fiscal reform in Hungary, the Czech republic, Poland and Denmark

Necessity and possibilities of an ecological budget reform

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Foreword

Environmental awareness is still low in all the CEE countries, thus there is little incentive for the decision-makers to move along with reforms in order to make the economic structures more environmental friendly. The reforms however are necessary, thus NGO's need to take the leading role taking active part in stimulating the process. Until the environmental awareness of the general public in CEEC is able to urge changes in the integration of the environmental policies, it is essential that the process receive sufficient incentives from the part of NGOs through a regional cooperation.

Clean Air Action Group, Hungary, Society for Sustainable Living, Institute for Sustainable Development and Danish Ecological Council have been cooperating for long now and are equipped with all the necessary scientific knowledge for assessing the available economic instruments for environmental protection. All four NGO is part of the Environmental Fiscal Reform Campaign of the European Environmental Bureau.

By shifting the taxes from human resources on environmentally harmful activities, basic problems of low employment rate and low income level of the Central-East-European Countries could be solved without unduly restricting profitability and competitiveness of the business as a whole. By eliminating the environmentally adverse subsidies, the competitiveness of environmental friendly production and services will increase and at the same time the position of the state budget bill will be more balanced, while the burden on the environment will be reduced.

The main objective of this study is to **stimulate the implementation of an Environmental Fiscal Reform** (EFR) in Hungary, the Czech Republic and in Poland. The authors of this work assess the possibility of an Environmental Fiscal Reform in Hungary, the Czech Republic and Poland and provide proposals to stimulate the process. Despite the study contains three national approaches to the possibilities of EFR, sometimes with different proposals, all three approaches represents the same basic principles. The similarities of the national approaches strengthen that however big the differences between each countries are the concrete steps should be based on a very simple principle: "Tax bads not goods".

Of course, we are well aware that our proposals cannot be implemented from one day to the other, because sometimes, in connection with some specific modifications, it is not easy to recognize that the long-term interests of the economy, the society and the environment in fact coincide with one another; and proposed changes may conflict with the interests of certain groups of great influence and strong interest enforcement power.

An increasing number of civil movements, interest groups and even government agencies represent the principles upon which this study has been based. The European Commission in Brussels, the European Parliament, the OECD and other institutions also stand by those principles and reinforce them in their statements, standpoints and documents published day after day. Opinion polls in Western Europe also reveal that many people understand and support the ideas to restructure the state budget in a way that gives priority to people, culture and environmental protection. Our experience shows that the representatives of virtually all industries recognize that the proposals are reasonable. Although, not surprisingly, the industries which are the most adversely affected momentarily but are still extremely powerful, do their utmost in practice to delay the already inevitable changes as much as they can.

Our proposals are meant to help Hungary, the Czech Republic and Poland be at the forefront of progress and take action to promote sustainable development. We are convinced that the implementation of our proposals would contribute to the preservation of human life and health, and would help:

- improve the state of the environment,
- expand employment,
- enhance the competitiveness of Hungarian labour force,
- raise the income levels of workers,
- reinforce social market economy,
- establish better conditions for education, culture, health and scientific research,
- accelerate economic restructuring,
- improve the balance of trade,
- utilize raw materials and energy more efficiently,
- relieve social tensions,
- improve social welfare services, and
- make more efficient preparations for the accession of Hungary to the European Union.

András Lukács
President of Clean Air Action Group,
Hungary

Necessity and possibilities of an eco-social budget reform in Hungary

Introduction

Proposals elaborated by Clean Air Action Group for a comprehensive reform of the Hungarian taxation and subsidization systems do not aim at introducing new types of taxes and additional subsidies, but at changing currently existing structures. This means specifically that on the one hand we wish to ease the burden on live labour and reduce the costs borne by up-to-date and environmentally friendly Hungarian products and activities, and we recommend that budgetary revenues lost as a consequence should be replaced by raising the taxes imposed on gravely environment-polluting activities and on such foreign and domesticated goods. On the other hand we intend to cut back markedly all the subsidies that have an adverse impact on the Hungarian society (and within that particularly on the environment and on human health). We seek a budget-wise neutral solution, i.e. if our proposals were implemented, the overall revenues of the Hungarian state budget would not grow, but would not diminish either, as compared to the original estimates.

The Chief aim of our proposals: environmentally- friendly and solidarity-based development of the Hungarian society

When calculating the specific figures of our proposals in the present study, we have taken as a basis the Act on the State Budget of Hungary for 2003: i.e. we have shown how this year's state budget would have looked like, had the Parliament adopted our proposals. We have done so because we believe that these data may constitute appropriate grounds for starting the green budget reform in 2004, if the needed political will is in place.

Reduction of wage costs and increase of subsidies granted for social tasks that cannot be placed on a market basis

1. Reducing the costs of live labour

Reduction of live labour costs needs to be achieved not by cutting wages in real terms, but by modifying the structure of wage costs and by improving efficiency. This way, the national economy could gain a better competitive position both in the short and the long run. On the one hand, this can be attained through cutting the rate of social security contributions and personal income tax charged on wages. Revenues that drop out as a result can be replaced by imposing similar levels of taxes on products and services polluting the environment and wasting energy and materials. On the other hand, enhancement of labour quality, support to creativity and innovation, and better work organization may be the measures to contribute towards achieving the mentioned goal. The value produced by live labour is approximately ten times as much as the total amount of wage-type expenditures. International statistical data clearly demonstrate that capital is not primarily attracted by cheap labour, but by highly qualified workforce with solid work ethics, as well as by well-organized and predictable economic, legal and political conditions and a healthy physical environment.

Consequently, if we want to enhance the competitive position of live labour against raw materials, energy and highly capital-intensive production equipment, then we have to enforce a fairer taxation system as well as the "polluter pays" principle.

Reduction of the taxes and social security contributions charged upon live labour has been a key element of the programme of both the previous and the current Hungarian Government. We are glad to see that this concept has finally been accepted by government circles, too, and that steps have been taken to put it into practice. By presenting our proposals, we wish to provide support, among others, for the reinforcement of this favourable tendency.

One of the basic tasks of the state budget is to contribute to improving the competitiveness of Hungary's economy. This can be primarily achieved **through raising the efficiency and the share of live labour**, which in turn could be effectively stimulated by reducing the tax and social security contribution burden placed on live labour. At present this burden is extremely large. Payable personal income tax is deducted from the gross wage, and a health contribution of HUF 4500 and other contributions and fees totalling approximately 50 per cent are also charged on the gross wage (*see Table 1.1.*).

Social allowance levels and the amount of the minimum wage have been practically the same for some time; therefore we have been keeping up our proposal that adequate difference should be created between these levels. This is why we supported the measures taken by the previous Hungarian Government to increase the minimum wage. (It is important to underline that the rise of the minimum wage to HUF 40 thousand as of 2001 was overcompensated at the level of the national economy by the 3 per cent reduction of the rate of social security contribution.) We support the current Government's decision to make the minimum wage exempt from taxes. We have kept proposing for years a programme for the reduction of labour costs, which is now affirmed by the plan of the Medgyessy Government to lower the rates of the **personal income tax** in two phases: cautiously as from 2003, then radically as from 2004. The rates of the **social security contributions** are planned to be cut back by 1.5 to 2 percentage points in the next two years. It is to be noted that in the European Union the difference between minimum wage and average wage is smaller than in Hungary, therefore the aforementioned measures will also assist Hungary's adaptation to the EU through the moderation

of social differences. This, however, can only be achieved by **decreasing the gross costs of wages**. Simultaneously with the reduction of social security contributions (which make up a substantial part of the total wage costs) and of personal income taxes, part of the lost budgetary revenues should be replaced from other sources.

Table 1.1.: Changes in the proportions of wages and public charges as a function of wage increase in 2002

Employer's costs HUF/month	Contribution to vocational training 1.5%	Employee's contribution 5%	Social security contribution 29%	Health contribution 4500 HUF/month	Gross wage HUF/month	Pension contribution 8%	Health insurance contribution 3%	Employee's contribution 1.5%	Personal income tax	Net wage HUF/month	Net wage as a percentage of gross wage	Net wage as a percentage of wage costs	State budget burden upon 1 HUF net wage	Employer's costs, under conditions of 1998	Change of employer's costs
71250	750	1500	14500	4500	50000	4000	1500	750	6000	37750	75.50	52.98	1.89	74752	3502
138000	1500	3000	29000	4500	100000	8000	3000	1500	20000	67500	67.50	48.91	2.04	147002	9002
204750	2250	4500	43500	4500	150000	12000	4500	2250	42000	89250	59.50	43.59	2.29	219252	14502
271500	3000	6000	58000	4500	200000	16000	6000	3000	61852	113948	56.97	41.97	2.38	291502	20002
338250	3750	7500	72500	4500	250000	20000	7500	3750	76044	141906	56.76	41.95	2.38	363752	25502

Note: As a consequence of declaring the HUF 50,000 minimum wage exempted from taxes in September 2002, net earnings of HUF 37,750 changed to HUF 43,750.
All employees earning less than HUF 128,000 per month are entitled for the tax allowance.
Personal income tax rates are being reduced in two stages: from 2003 slightly, then from 2004 radically.
Social security contribution rates are planned to be decreased by 1.5 to 2 percentage points in 2003–2004.
Source: Hungarian tax laws

We would like to emphasize here that the burden on live labour has to be alleviated in the aggregate. Accordingly, it is important that measures such as the justified extension of the scope of taxes and social security contributions do not neutralize the impacts of steps lessening the total volume of labour costs.

Reduced wage burdens also make it possible to strengthen to some extent the public sector without increasing the expenditures of the state budget. With a view to the EU accession, too, Hungary has to reinforce its public sector. In Hungary 785 thousand employees work in the public sector, which only accounts for less than 19 per cent of the total number of employed, whereas in Western European countries this proportion is 20 to 25 per cent – and they have a significantly higher total employment rate than Hungary. If this employment level drops further, it may have the consequence that the Hungarian public sector will not be able to fulfil its fundamental tasks, especially in the fields of environment protection and healthcare. (For instance, in order to meet EU requirements in the performance of their tasks, regional environment and nature protection agencies should augment their staff numbers by 1600.)

Part of the needed extra wages in the public sector can be produced by strengthening the service-providing character of the sector. For example, in customs clearance the staff should be given wages corresponding to the EU level, and all these expenditures should be charged to the imported goods as customs clearance fees.

1.1. Reduction of social security contribution

High levels of social security contributions are among key factors causing strong adverse effects on the Hungarian employment rate and competitiveness. Reduction of the social secu-

rity contribution already formed part of the previous Hungarian Government's programme, and under that scheme a significant cutback was effectively implemented. We were glad to read that the documents of the current Government (they projected a decrease of 1.5 to 2 percentage points for the social security contribution rates, which they plan to start implementing as from 2004) contain the very same argument that we have been stressing in our budget proposals since 1992: namely, that lower social security burdens contribute to alleviating unemployment and to raising the employment level.

Social security contribution payable by employers decreased from 39 per cent in 1999 to 33 per cent in 2000, which (calculating also with the relatively small cost increase due to higher health contribution) resulted in an overall drop in the level of wage costs by HUF 210 billion in 2000. In 2001, social security contribution to be paid by employers was further cut down to 30 per cent, and in 2002 to 29 per cent.

A significant rise in the total number of employed workforce may open up the opportunity to reduce further social costs to be borne by one active earner.

1.2. Reduction of personal income tax

Taking into account inflation and the number of active earners, Hungarian laws pertaining to personal income tax should be modified in a manner that on the average the per capita income tax becomes lower in real terms. Within that, we attach particular importance to increasing the tax allowances applicable according to the number of children or other dependants in a family, which was included in the State Budget Acts for 1999 and 2000, as well as in those for 2001 and 2002. All in all, higher rates of tax allowances will lead to lower personal income tax levels for those concerned. These tax allowances are one of the possible solutions to achieve our aims; therefore we think that it is advisable to keep using them in the future, too.

In our view the Court of Constitution of Germany passed an exemplary resolution declaring it a constitutional right to obtain tax exemption for all the costs of bringing up and educating children. We think that Hungary should follow the same path.

Moreover, we recommend that the tax allowance should be extended to specified expenses for educational purposes: payments to funds supporting compulsory education should be deductible from the personal income tax even if the payment is made by individuals who are personally concerned (e.g. close relations).

During the term of the previous two governments, however, the increase of the family allowance has been much lower than what would have been necessary and feasible.

We welcome the current Hungarian Government's plan to cut further back the rate of personal income tax in 2003 and 2004. At present we do not propose a larger decrease, because we intend to alleviate wage burdens by reducing the social security contribution (*see the previous Section*).

2. Higher state contribution to environmental protection and healthcare

On 17th September 1997 the Hungarian Parliament unanimously adopted the National Environmental Protection Programme (NEPP), and the Second National Environmental Protection Programme (NEPP-II) for the period 2003–2008 is now under preparation. It is an urgent task to implement the Programme in practice. We believe that the goals set in the Programme can be accomplished principally through a budget reform which takes into account the environmental aspects, and within that particularly through the abolishment of subsidies granted from public funds to environment-polluting activities. Furthermore, laws and regulations need to be adjusted to meet current requirements, and the standard of public tasks related to environmental protection (work of authorities, awareness raising) needs to be enhanced as well, which, again, are inconceivable without financial contribution by the state. We think that providing direct (not normative) state support to individual economic entities is generally not the most efficient means of improving environmental quality. However, under current circumstances, we accept that such subsidies are also needed occasionally to better the environment. Therefore we agree with the intention of the Hungarian Government's Economic Policy Programme stating that resources devoted to environmental protection purposes should be increased, but we do not think that the planned rate of the increase is adequate.

Direct state support for environmental and health protection purposes should be granted mainly through the budgetary channels of the Ministry of Environmental Protection (allocated funds titled *Environmental Protection Fund Target Tasks /KAC/*), and through other estimated funds and separate state funds. Distribution of funds should be efficiently coordinated at the level of ministries, and EU funds should be involved to maximize the support available.

We think it is also necessary that a significant portion of the funds devoted to **public works** should finance projects which contribute to the protection of the environment (e.g.: sewer network development). Local governments should be given proper information and incentives to carry out these tasks.

The draft version of the Second National Environmental Protection Programme (NEPP-II) contains a detailed statement about the needed environmental subsidies. Therefore we will only highlight some key elements in the sections that follow.

2.1. Environmental and health protection awareness raising, information, education and culture

Within awareness raising we attach particular importance to making known and promoting ways and means of forming a healthy and thrifty individual and family lifestyle through regular educational advertising and informative media programmes, as well as to incorporating these into the curriculum of educational and cultural institutions.

Revenues of commercial advertising have been rising extremely quickly since the early years of the market economy in Hungary, and in 2002 they already exceeded HUF 200 billion. A considerable portion of the commercials advertises activities that are harmful to the environment and human health (such as tobacco, alcoholic beverages, motorcars, etc.). At the same time, educational advertising and communication to sustain or better our environment and health are hardly given any money. The whole Hungarian society suffers from the damages caused by this situation; therefore radical changes should be implemented as soon as possible.

Non-commercial communications, and primarily, educational advertising should be granted financial support to shift the emphasis towards human values, promote cultural standards of the population and encourage meaningful leisure activities (such as sports), give guidance for leading a healthy and environment-oriented way of life, and improve the environmental awareness of people, which is today, unfortunately, still very low.

The following is a list of the benefits achieved through non-commercial communications and educational advertising in countries where the needed favourable conditions have been given to these activities:

- Family protection, life and property safety, prevention of accidents and injuries, consumer protection, health protection, healthy way of life, environmental protection and energy saving are areas where educational advertising brought very positive results.
- State budgets saved on healthcare expenses, for instance, owing to the improved health standard of the population.
- Economic efficiency grew at the level of the national economies (e.g. in energy use).
- Citizens started to take a more active part in local and public issues, which opened up enormous new resources – left unused earlier – for social development.
- People started to feel healthier and more contented.
- Information spread by the media became more balanced and objective, which reinforced democracy.
- Governments became more popular and their support basis expanded.

Once that modification is adopted and implemented, democracy will benefit from it through more powerful civil awareness, which is indispensable for the development of the society.

We are fully aware that today it would be hopeless to demand as much funds for educational advertising as the amounts spent on commercial advertisements. Nevertheless, it is unacceptable that thousand times as much is devoted to the latter than to educational advertising. It is also unacceptable for us that media programmes and printed materials containing violence and pornography receive a much higher share of the resources produced by the society as a whole, than works and programmes promoting a desirable way of life. With a view to changing these proportions we have proposed that the rate of cultural contribution imposed on advertisements (which is currently 1 per cent) should be raised considerably, just like the amount of cultural contributions levied on works containing violence and pornography, and that the collected extra revenues should be entirely spent on educational advertising and non-commercial communications. In the case of the written and electronic press we recommend that the raised amounts should be returned in full to the newspaper or media that they had been collected from. In this manner no damage whatsoever would be caused to any newspaper, radio or television; on the contrary, they would become more vibrant and interesting, and provide more balanced information.

2.2. Offsetting energy price rises; improving energy efficiency

a) Pecuniary compensation

Price rises of electricity and natural gas in the previous years should have been implemented in conjunction with a fair compensation. This is why we supported the proposals of the Energy Interest Representation Council about social offsetting. Individuals and public institutions must be entitled to compensation. Pecuniary compensation is indispensable from an environmental protection and energy saving point of view as well, because energy taxes

can only be increased in this manner (otherwise, social tensions would grow and social resistance would probably prevent taxes from growing at the required rates).

As a specific sample, in the following section we describe our proposal for a possible way of offsetting the effects of moving the VAT rate of electricity from 12 to 25 per cent.

Data of UNIPEDE for 1996 contain the number of Hungarian household consumers broken down by main categories of electricity use. This has not significantly changed in recent years; therefore we can use it as a starting basis.

After an analysis by the quantity of consumption, we may draw the following conclusions:

1. Consumers with a used quantity up to 1000 kWh per year account for 27 per cent of all household consumers, whereas the electricity they used makes up only 5 per cent of the total household consumption.
2. Those consuming between 1001 and 2000 kWh represent 22 per cent of all consumers, while the electricity they used accounts for 10 per cent of the total household consumption.
3. Consumers of a quantity between 2001 and 5000 kWh represent 38 per cent of the total number of consumers, and the electricity they used is 43 per cent of the total household consumption in Hungary.

As regards compensation, consumers who used a quantity above 5000 kWh per year should not be taken into account, because some of them primarily use night-time electricity with Category B preferential tariff, and part of them have such income levels that they are not in need of compensation.

Our calculations show that total budgetary revenues – assuming unchanged consumption – from a possible rise in the rate of VAT would amount to some HUF 30 billion (calculating only with household consumption). Out of that sum, at most HUF 20 billion should be spent on compensation, which would affect approximately 4 million consumers. From the above figure we should deduct the number of consumers having two metering points (e.g. resort homes), which can be estimated roughly at 500 thousand metering points. As a consequence, compensation should be granted in the case of around 3.5 million metering points.

We think that the compensation should have been implemented primarily through the increase of pensions and of the family allowance.

According to the Yearbook of the Central Statistical Office, in 1998 there were 3.1 million pensioners in Hungary. Within the population, those under 18 years of age numbered 2,337 thousand, and there were 153 thousand daytime students in higher education institutions, so the total number of Hungarian citizens entitled to receive family allowance was 2,490 thousand.

As a consequence, the rise in the VAT rate could be offset in a manner that it does not involve any additional administrative work. The overwhelming majority of those concerned would not find themselves in a more disadvantageous position than they are now; on the contrary, most of them would clearly benefit from the changes.

As a result, major household consumers will be doubly interested in energy saving. On the one hand, higher prices will encourage them to do so in the first place, and on the other, the extra VAT revenues may allow the government to grant larger subsidies for energy efficiency enhancement. To increase further the anti-inflationary impact, this could be achieved by, for instance, granting someone HUF 100 thousand for energy efficiency improvement through allowing them to deduct an annual HUF 20 thousand from their natural gas bill for 5 years (i.e. tha state remits this amount to the service provider).

b) Support to energy efficiency enhancement

Within the target limits of compensation, energy efficiency enhancement should receive as large a share as possible. This method should be applied in the case of public institutions and public services. We think that a steadily increasing share of the compensation should be made payable through energy efficiency enhancement schemes because it is the only way to reduce, in a fairly short time, the need to continually pay compensation, while modernizing the economic structure and creating large numbers of new job opportunities. Besides compensation, energy efficiency enhancement is a useful tool to improve economic efficiency, and thus to increase Hungary's chances to catch up with the European Union. It is important to note that although they exist, other methods of boosting economic growth (such as pure banking incentives) may involve the risk that growth is achieved at the expense of efficiency.

Compensation through energy efficiency schemes is also extremely beneficial due to its lasting anti-inflationary impact. This method may cut energy imports, the share of which has been increasing gradually, coupled with a considerable price rise. Furthermore, the costs of the environment pollution caused by a growing energy use, the investments needed to remove environmental damage and other related activities may also become avoidable in this manner; and this, again, has an anti-inflationary effect. Another reason why energy efficiency enhancement requires quick implementation is that the mentioned costs will grow exponentially over time.

Energy efficiency enhancement means that the same or even better results are achieved, while less energy is used. So energy efficiency is not about austerity measures or irrational saving. The energy efficiency enhancement programme should be promoted from Hungarian state funds. At present, practically no energy efficiency programmes can be financed from ordinary bank loans because of the high level of internal interest rates. Therefore, it would be essential to ensure **preferential rates of interests** for this purpose by re-allocating available funds (a few examples, also in Hungary, have already proved that this works), as well as to transform the national financial policy so that **speculative financial activities could be controlled** and to force the Hungarian banking system to operate at minimum interest margins. Energy efficiency enhancement is the most effective tool of promoting economic modernization and development, since it combines efficiency and economic stimulation with higher employment.

The energy efficiency enhancement programme should be incorporated into the system of government measures aimed at bettering the housing situation in Hungary. In this manner the two programmes could multiply each other's beneficial impacts.

The measures needed in this field were correctly determined by Government resolution No. 399/1995 on the National Action Programme Promoting Energy Saving and Energy Efficiency Enhancement. Resolution No. 1107/1999 (X.8.) of the Hungarian Government was also right in setting the necessary steps for the energy saving and energy efficiency enhancement strategy of the period up until 2010. Measures taken in connection with energy issues usually exert a medium or long-term influence, so the 10-year programme meets this real economic requirement. Unfortunately, from the tasks described in the resolutions only a negligible part has been put into practice.

When Government resolution No. 1107/1999 was adopted, even the following year's Hungarian state budget was prepared in the hope and on the assumption that the rise of energy prices would only be temporary in world markets, and that they would not reach such levels as they eventually did. As a consequence, also the revenues from VAT imposed on energy saw a substantial increase. Part of these sums should definitely be devoted to the energy efficiency enhancement programme. Coupled with the raised VAT rate and with other available

resources (German loan, Environmental Protection Fund, etc.) this makes up funds which, although far from being sufficient, already enable making some headway.

Implementation of the energy efficiency enhancement programme over a period of several years could **provide numerous people with jobs**. It could increase the GDP as well as improve the balance of the state budget by several tens of billions of HUF (through additional payments of taxes and contributions).

Energy efficiency enhancement is far from being a fully exploited opportunity. This is true even if the efficiency of investments in this field is measured at current prices of energy.

A joint study titled *Macroeconomic Impacts of Energy Efficiency* (published in Budapest, 1998) of the economic research firm GKI and the energy development and research company EGI has found, among others, that at prices of the time, the following measures could be implemented most economically:

They assume that electricity generation is partly replaced by energy efficiency measures and compare the marginal costs of investment for saving energy with the costs of establishing one unit of extra capacities. When only the costs of starting up an extra capacity are considered, the marginal costs of replacement are lower than those of establishing extra capacities for up to 600 MW. When operating costs of the new capacities are also considered (primarily the costs of fuel consumption), the above figure moves up to 650 MW. (Additional costs are determined presuming 30 years of useful life.)

Assuming a payback period of ten years at most after improving the efficiency, it is more worth saving energy than using additional energy supplies up to the following proportion (in percentages of total primary energy consumption in the given sector):

- households: 15.1 %
- communal sector: 4.7 %
- industry (not including energy generation): about 18 %.

We would like to underline once again that the above numbers reflect prices of 1998, when energy prices in world markets reached their lowest level of the past 10 years. With energy prices that are in line with current world market prices and also incorporate the external (environmental, etc.) costs of energy generation, saving can show its benefits on a much larger scale. It is also important to take into consideration that environmental protection requirements are expected to grow stricter, which will lead to additional cost increases. On account of the 8 per cent rate of return on assets, ensured for foreign-owned companies of the energy sector, energy efficiency enhancement brings about even more benefits for the Hungarian society. The energy policy should be elaborated accordingly.

Energy efficiency enhancement is a precondition as well as a stimulus of any modernization scheme in Hungary. Governments all over the world are ready to provide financial support for energy efficiency enhancement.

District heat supply services are essential elements of the energy issue; therefore we attach particular importance to the need and possibility of improving them. Enhancement and modernization of district heating services may alleviate the environmental problems of even the most polluted areas.

Under the direction of the Hungarian Energy Office a specific programme has been elaborated to enhance energy efficiency in public institutions. However, implementation is stuck due to the law on state guarantees. It is an absurd management practice that the state budget undertakes general guarantee without any limits for energy imports (see Art. 36 of Act CXXXIII of 2000 on the State Budget of the Republic of Hungary for 2001 and 2002), while no guarantees whatsoever are assumed for energy efficiency enhancement.

Hungary’s commitment taken on by signing the Energy Charter Convention also requires the country to improve energy efficiency. Section 19 of the Convention calls for the Signatory States to *"give priority to the improvement of energy management efficiency and to the use and development of renewable energy sources."*

The aforementioned Government resolution No. 1107/1999 estimated HUF 1 billion for 2000 as a state support for improving energy efficiency. In 2001, the Hungarian Ministry of the Economy already devoted HUF 5 billion to this purpose. In our opinion, this is still a very small amount. As a consequence of the actual price rise of imported energy, in the first six months of 2000, the price of the total Hungarian energy imports expressed in HUF increased by nearly 86 per cent as compared to the same period of the previous year. This means that Hungary paid by almost USD 1 billion (i.e. by HUF 280 billion) more than a year before. In 2001, the overall energy price level did not fall significantly, because natural gas prices went up, while petroleum prices came down. In 2002, a slightly decreasing price level prevailed. On the other hand, also the quantity of imports is expected to rise because Hungarian production is gradually shrinking, and the volume of domestic energy use is prognosticated to increase with economic growth. Enhanced energy efficiency, however, makes it possible to tackle this dual impact and to achieve substantial savings.

The government resolution set the target to save 75 PJ/year by 2010, i.e. to save an annual 7.5 PJ on average in the next 10 years. This means that new savings amount to some HUF 7 billion per year, calculated at current prices. This is seven times as much as the annual HUF 1 billion that the state is planning to invest! Since this programme is implemented on an accumulative basis (i.e. it is increasing every year), the amount of realized savings will gradually grow over the years (*see Table 2.2.a.*).

Table 2.2.a.: Efficiency of energy savings, expressed in pecuniary value

Description	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2000–2010 total
Savings in PJ*												
Annual	6.82	6.82	6.82	6.82	6.82	6.82	6.82	6.82	6.82	6.82	6.82	
Accumulated	6.82	13.64	20.45	27.27	34.09	40.91	47.73	54.55	61.36	68.18	75.00	450.00
Savings in million USD**												
2.21 million USD/PJ	15.1	30.1	45.2	60.3	75.3	90.4	105.5	120.5	135.6	150.7	165.8	994.50
3.53 million USD/PJ	24.1	48.1	72.2	96.3	120.3	144.4	168.5	192.5	216.6	240.7	264.8	1588.50
Improvement	9.0	18.0	27.0	36.0	45.0	54.0	63.0	72.0	81.0	90.0	99.0	
Savings in million HUF**												
500.7 m HUF/PJ	3414	6828	10242	13655	17069	20483	23897	27311	30725	34139	37553	225315
942.2 m HUF/PJ	6424	12848	19272	25696	32120	38545	44969	51393	57817	64241	70665	423990
Improvement	3010	6020	9031	12041	15051	18061	21072	24082	27092	30102	33113	
Expenditures in million HUF***												
Annual	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
Accumulated	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000	11000
Rate of return****												
Annual	6.42	6.42	6.42	6.42	6.42	6.42	6.42	6.42	6.42	6.42	6.42	38.54
Accumulated	6.42	12.85	19.27	25.70	32.12	38.54	44.97	51.39	57.82	64.24	70.67	423.99

*Government Decree No. 1107/1999 (X.8.) on Energy Savings up until 2010 ...; **Based on actual imports of the period January–May 1999 and January–May 2000, calculated at prices of January–May 2000; ***According to the Government Decree, annual subsidies total HUF 1000 million; ****Rate of return of the programme was calculated at prices of 2000, not including interests, because the amount of expenditures is constant; Source: Own calculations based on Energy Management Reports

Also the savings from the avoided environmental pollution should be added to the above-mentioned sum. These are substantial savings: in a period of 11 years, among others, the quantity of emitted sulphur-dioxide will drop by 300 thousand tons in total and carbon-dioxide emissions will diminish by 30 million tons, as compared to similar values without any energy efficiency enhancement programme (*see Table 2.2.b.*).

Table 2.2.b.: Pollutant emission eliminated through energy savings

Description	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2000–2010 total
Sulphur dioxide thousand tons/year												
Annual	4.55	4.55	4.55	4.55	4.55	4.55	4.55	4.55	4.55	4.55	4.55	
Accumulated	4.55	9.09	13.64	18.18	22.73	27.27	31.82	36.36	40.91	45.45	50.00	300.00
Carbon dioxide million tons/year												
Annual	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	
Accumulated	0.45	0.91	1.36	1.82	2.27	2.73	3.18	3.64	4.09	4.55	5.00	30.00

Source: Own calculations based on data of the Energy Balance and the Central Statistical Office of Hungary

2.3. Support to environmentally friendly means of transport

Motor vehicles cause severe harms to the environment, health and the economy. To ease the damage, it is vital to give priority to developing and promoting alternative means of transport.

2.3.1. Improved public transport services

Public transport is a public service; therefore, its performance should not be measured only by efficiency ratios used in the private sector. (It is, of course, not that we disregard the necessity of efficient and rational operations of public transportation companies.) As a public service, public transport should operate efficiently to obtain the most social, economic and environmental benefits that financial ratios and corporate accounts can hardly reflect. Therefore, besides existing state support, we propose that public transport should be improved through a series of measures described below, which affect the state budget as well. Simultaneously with those actions an appropriate system of requirements should also be specified. The importance of public transport has been recognized in the EU member states as well. Accordingly, they assist these activities through a range of measures, including various preferences (*see Table 2.3.*).

Table 2.3.: Tax allowances granted to public transport in the European Union and Norway

	VAT charged on fuels used by public transport	Excise duties imposed on fuels used in public transport	Costs of commuting to work can be accounted as expenses even in the case of using public transport	Exemption from energy/CO_2 tax	Exemption from payment of motor vehicle tax
Austria	10% instead of 20%	On gas used in local public transport: 0			
Belgium	6% instead of 21%	Railways: 0; regional public transport: allowance*	yes		
Denmark	0% (except for tourist buses)	On mineral oils: 0		Mineral oils, electricity	Vehicles operated in scheduled service
United Kingdom	0%				
Finland	6% instead of 22%				
France	5.5% instead of 20.6%				
Greece	8% instead of 18%				
Netherlands	6% instead of 17.5%		yes		
Ireland	0%				
Luxembourg	3% instead of 15%				Motor vehicles used by local governments and public institutions, or used for public purposes
Germany	7% instead of 16% (within a distance of 50 km)	For methane and condensed natural gas: allowance**	yes		
Norway		0			Buses (also exempted from import duties)
Italy	10% instead of 19%, urban public transport: 0%				
Portugal	5% instead of 17%	On gas used in public transport: 0			Public transport motor vehicles
Spain	7% instead of 16%			Mineral oil used by railways	State-owned motor vehicles, passenger transport
Sweden	12% instead of 25%			Energy types used by railways other than mineral oils	

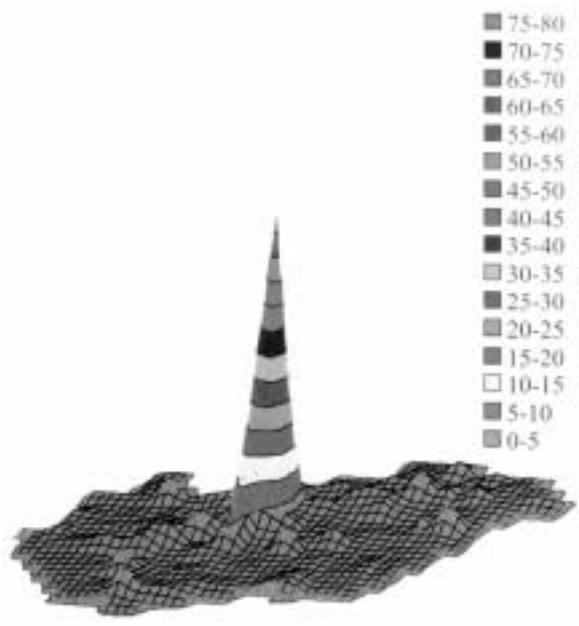
*Excise duty payment by regional public transport companies: 238 ECU/thousand litres instead of 287.2 ECU/thousand litres
**Excise duty imposed on methane used as engine fuel: 9.5 ECU/MWh instead of 24.2 ECU/MWh. Excise duty levied on condensed natural gas: 122.3 ECU/ton instead of 310.9 ECU/ton

Source: Database of environmental taxes in the European Union Member States, plus Norway and Switzerland. Evaluation of environmental effects of environmental taxes. European Commission, 1998; www.oecd.org/env/policies/taxes/index.htm

We understand that public transport needs improvement all over the country; still we propose that most of the support should be devoted to improvements in Budapest and its surroundings. The reason is that 18 per cent of all inhabitants of the country (or 23 per cent, if we include commuters from other places) live here, and nearly 25 per cent of the air pollution

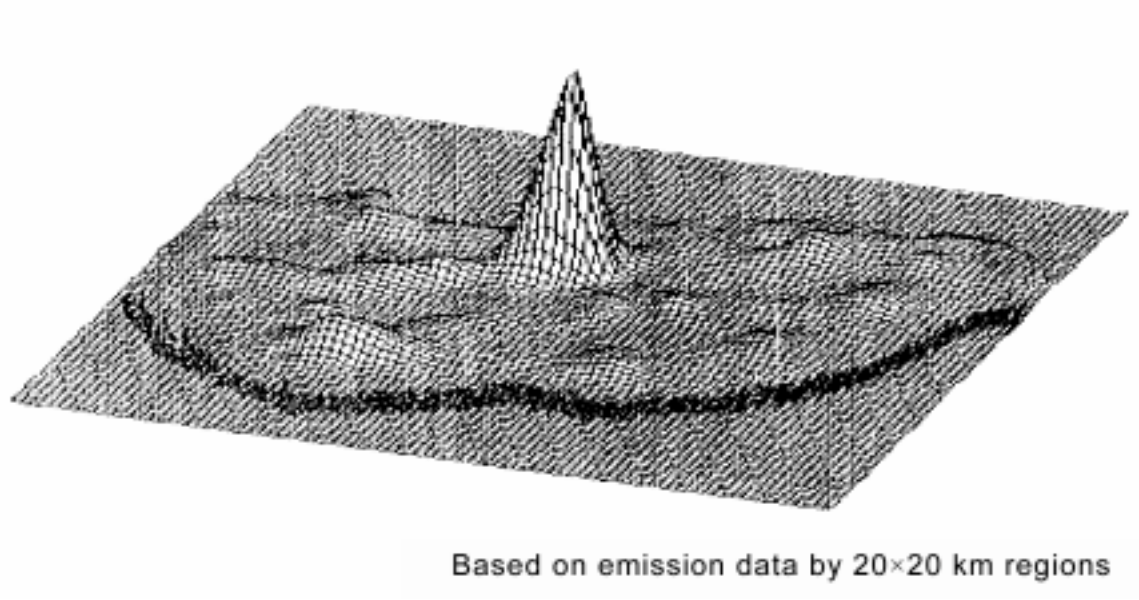
from vehicles is generated in Budapest, an extremely small area representing only 0.5 per cent of Hungary's entire territory (*see Figure 2.3.a. and b.*).

Figure 2.3.a.: Regional distribution of carbon monoxide emission by road transport in Hungary in 1998 (thousand tons per year)



Source: Ministry of Environment Protection

Figure 2.3.b.: Regional distribution of particulate matter emission by road transport in Hungary in 1993



Source: Ministry of Environment Protection

In our opinion the development of the suburban railway network requires special attention. Data of the traffic count carried out in 2000 revealed that nearly 390,000 people in 230,000 motorcars crossed the boundaries of Budapest every day. Those cars are responsible for about 65 per cent of the air pollution from cars in Budapest. At the same time, parallel with almost all the main roads going into the centre of Budapest, there are railway lines which are suitable for suburban transport (practically the only exceptions are the roads leading into the Erzsébet Szilágyi Avenue on the Buda side, where there is no railway line, but traffic there is assisted by a very efficient tramway line).

As a consequence, Budapest and its surroundings represent the area where transport-related environmental damage and traffic tensions can be moderated in the most cost-efficient way. The above measures could improve noticeably the living conditions of nearly 3 million people in and around Budapest.

2.3.2. Improved railway transport services

Increasing energy prices and stricter environmental protection requirements make it an urgent task to improve the standard of passenger and freight transport services of the railways, and to attain a higher share within the performance of the transport sector. This could be promoted by coordinating more efficiently – with state assistance – the activities of the German, Austrian and Hungarian railways.

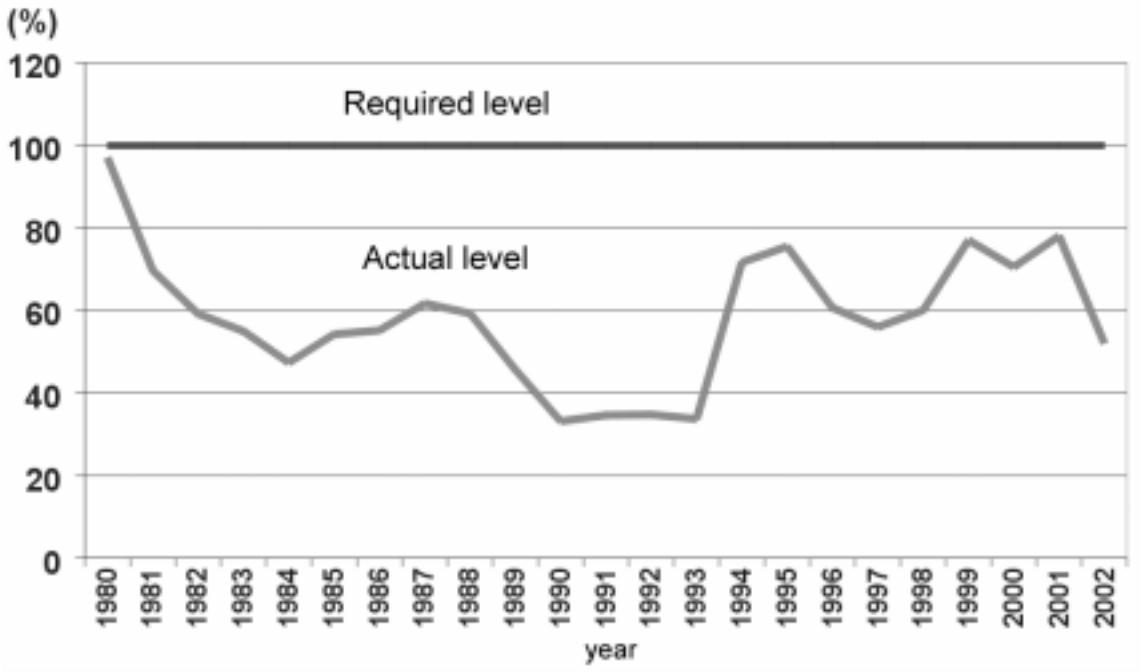
Within railway transport, we think that priority should be given to completing the neglected renovation projects, to improving suburban passenger transport services and to developing combined freight transportation. The railways' arrearage in renovation and modernization worth HUF 1300 billion has accumulated through the fault of former Hungarian governments; therefore we consider it the state's responsibility to make up the arrears.

Railway passenger transport has always been regarded as a public service. Earlier the state ordered the services it deemed necessary, determined the fares, and from the state budget it allocated the subsidies needed to cover the difference between the receipts from ticket sales and the actual expenditures of the railways. This system, however, in practice ceased to exist at the beginning of the 1980s. The state kept ordering the services, but failed to pay for them since 1983. Therefore the passenger transport branch of the Hungarian State Railways Co. (MÁV), and together with that also the whole company, has become heavily loss-making. As a consequence, it was hardly possible to effect new investments to improve the competitiveness of the railways; what is more, there was not, and even today there is not, enough money for the necessary maintenance and renovation tasks either. Thus, MÁV was forced to reduce substantially the funds to be spent on upkeep, maintenance, renovation and modernization. Even today only less than 80 per cent of the necessary investment resources are available at MÁV Co., but in the past decades this level of resources has characteristically been under 60 per cent (*see Figure 2.3.c.*). This practice of the Hungarian state is contrary to EU Council decree No. 1191/69, saying that if the state orders public transport services, and the receipts from fares do not cover the costs, then the state has to pay for the loss. (Decrees of the EU Council are statutes with mandatory effect for all member states.)

We think it is a mistaken policy that the state, instead of allocating sufficient resources from the central budget, forces the railway company to take up international loans. MÁV Co. is unable to pay back the loans, so from time to time it needs rehabilitation by the state. Consequently, the amounts used for renovation and other investments will have to be paid after all from public funds anyway, at the cost of taxpayers. In addition, tax-paying citizens will have to pay also for the interests of the loans, making foreign banks even richer. What is more, international financial institutions set as a precondition, among others, that the number of trains and railway stops should be reduced and at least one-seventh part of the railway network should be closed down. This is a grave interference in the internal affairs of Hungary,

and the Hungarian Government acted irresponsibly when it provided state guarantees for such loans. (The loan contract, of course, does not mention shutting down railway lines, only handing them over to other entities; nevertheless these steps will in practice lead to closing down the concerned railway sections. Fortunately the banks did not take this stipulation seriously, because the deadline set for the implementation expired already a long time ago, but the affected railway lines are still in operation. If adequate funds are not available for the renewal of those sections, though, it is to be feared that they will simply reach such level of physical deterioration that closing them down will become inevitable.)

Figure 2.3.c.: Changes in the level of development funds of the Hungarian State Railways Co.



Source: Hungarian State Railways (MÁV) Co.

During the last two decades, transport-related measures at the level of state politics have repeatedly hit the more environmentally friendly railway transportation, placing it into an ever more disadvantageous position. Among such interventions one of the most important was that up until 1991 the tariffs of freight transportation into COMECON countries were kept at an extremely low level in order to promote integration of these countries into the COMECON. As a result, in 1990 alone, MÁV incurred losses worth some HUF 80 billion at current prices. Considering the whole period under review, revenues lost by MÁV owing to the above factor may be estimated at several hundreds of billions of HUF.

Another major political decision affecting the Hungarian railways was the Yugoslav embargo, which caused direct losses totalling about HUF 50 billion for the Hungarian State Railways Co.

In connection with Yugoslavia, MÁV suffered losses due to other political reasons as well. MÁV's international accounting system is based on multilateral international and bilateral interstate agreements. These agreements can only be modified with state approval. Towards the former Yugoslavia, the Hungarian state delayed taking the necessary steps for political reasons, which resulted in outstanding debts due to MÁV in the value of some HUF 30 billion, which is still unsettled today. Since this loss, again, is incurred as a consequence of a

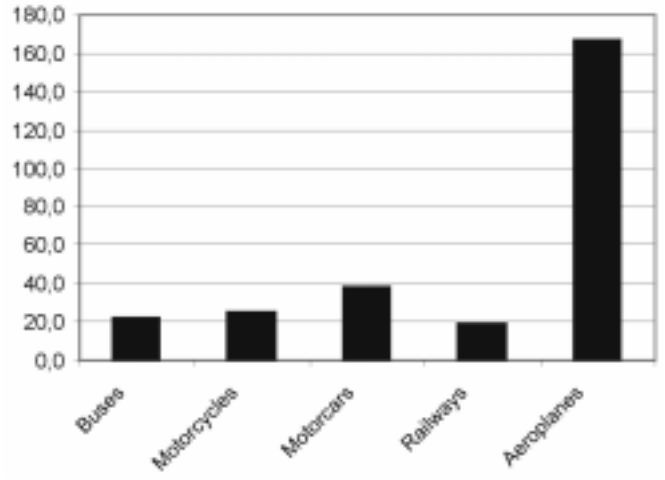
state decision, the Hungarian state should purchase immediately the obligations of such origin from MÁV Co., in one lot, at full price with accrued real interests. (Payment of the interests is even more justified because MÁV was compelled to take up substantial loans for lack of appropriate state measures.) It is to be noted that although repayment of the Yugoslav debt has started recently, this is an extremely slow process and is made in very small instalments.

Introducing the system of free travels for Hungarian citizens aged between 65 and 70 was once again an entirely political decision. This causes MÁV to lose revenues worth about HUF 2 billion every year. (This amount is higher than the savings MÁV could achieve annually by closing down 1000 km secondary railway lines – plans for such steps appear from time to time among the news.)

To avoid misunderstandings, we have to underline that we do not want to dispute whether the mentioned decisions were politically right or not. "All" we want to call the attention to is that these government decisions had nothing to do with the market economy (they were taken at a purely political level), but the resulting losses had to be borne by an economic enterprise, the Hungarian State Railways Co., operating in keen market competition. And that is unacceptable for us.

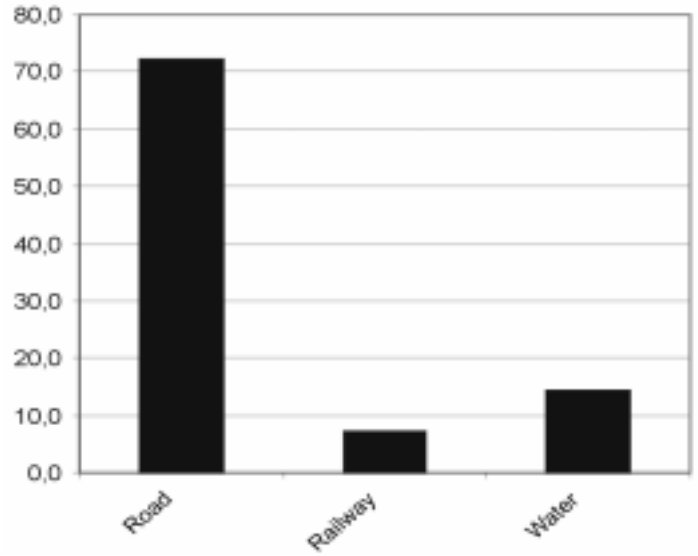
While the state failed to pay the railways for the services it had ordered, and made the railway company pay for a large part of its decisions taken for state political reasons, ever larger preferences have been given to road and air passenger and freight transportation. These steps have been taken in spite of the fact that railway transportation has proved to be much more favourable than its mentioned competitors regarding energy consumption (*see Figure 2.3.d.*) and the related air pollution (*see Figure 2.3.e.*), as well as land occupation (*see Figure 2.3.f.*), accident ratios and noise emission.

Figure 2.3.d.: Specific energy use of passenger transport in the European Union (petroleum ton-equivalent / million passenger-kilometres)



Source: European Commission, 1999

Figure 2.3.e.: Specific energy use of freight transportation in the European Union (petroleum ton-equivalent / million ton-kilometres)



Source: European Commission, 1999

Figure 2.3.f.: Land occupation of modern railways and motorways, calculated for equal transportation performance

MÁV Co. has elaborated its detailed concept about the future of the Hungarian railways. The concept has divided the railways into two main parts: about half of the network will remain in the primary network, while the other half will form part of regional railway networks. The issue of financing has been a key problem in elaborating the concept. Only the primary network may count upon state funding, and even that support will depend on the financial standing of the Hungarian state budget. Within the concept, the part concerning funding is unacceptable because it is contrary to the provisions of the Act on Fair Economic Competition that the rival road freight transportation receives huge direct and indirect subsidies, although its operation has a specific environmental pollution level which is by more than a whole order of magnitude higher than that of the railways. What is more, road transportation uses the infrastructure virtually free of charge. Owing to the practice of cross-financing, these costs are paid by car-owners, constituting the overwhelming majority of Hungarian citizens, and – through taxes – by the whole population.

Manufacturing of railway vehicles in Hungary is a closely related issue, and the government should treat it as a high-priority task. (Clean Air Action Group prepared a study on the subject and published it as an appendix to the 1998 budget proposals. At request a copy will be sent to anyone interested.)

2.3.3. Promoting the general use of traffic calming measures

It is especially important to assist and encourage local governments in elaborating traffic calming programmes as well as safe and pleasant conditions for pedestrians and cyclists in densely populated areas. Legal regulations, Parliament resolutions and also Hungary's international commitments demand such measures; however, in practice virtually nothing has been done for the implementation. To change this situation, state measures and means should also be involved. They should provide local governments with sufficient and high quality professional directives, introduce new technical specifications, supply extensive information to the general public and give financial support to specific development projects through tenders.

2.3.4. Abolishing financial discrimination against bicycle use

It is worth considering that cyclists and pedestrians should be granted the same non-taxable travel allowance as motorists, when they travel or walk the same distance to work. It is unjustified and, presumably, unconstitutional that a means of transport which is seriously harmful to the environment is favoured against other, less polluting transportation methods. A measure ensuring equal financial conditions for cyclists and pedestrians could benefit the entire community in several ways: environment pollution would be reduced, motorcars would be used in smaller number, thus easing congestion and land occupation, and people could live a healthier way of life. The idea is quite feasible: the municipality of a town in England, for instance, has used this incentive successfully to persuade its employees to use a bicycle instead of a car when travelling to work.

In our view, the task of bringing cycling into general use should be treated as a complex programme, and adequate incentives should be given to each element of the programme. More funds should be allocated to creating the conditions needed for safe bicycle traffic and to establishing appropriate bicycle storage facilities as well.

2.3.5. Giving preferences to the use of taxis

Using cabs is much more beneficial both economically and environmentally than a practice when everyone drives one's own car. Using more cabs could reduce congestion on the roads, traffic jams and parking problems. In some cases even public transport can benefit from the widespread use of taxis (e.g. when people cannot use public transport services at night to return home, and they rather use their cars to be on the safe side). Therefore we recommend that the use of cabs should be given preferential treatment in Hungary as well, similarly to several EU countries. There are many possible methods for such preferences; below are only some examples of the available options.

Public institutions in Budapest may reduce their fleets of motorcars to half of their current size on average, and use a portion of the money spared for travelling by cabs. (This would also have an enterprise-promoting impact.)

Taxi drivers pay substantial amounts of taxes (excise duty, VAT, personal income tax, social security contribution, local tax on trade, etc.), which reduce their net revenues. So they have low real incomes and, as a consequence, low pensions (besides, they can earn less when they are older, because taxi driving is a hard work).

2.4. Protection of air quality

Half of the population in Hungary live in areas where the air is polluted to some extent. Air quality needs to be improved considerably by implementing the proposals mentioned earlier in this document and through various other measures.

Having an air quality measurement network of adequate density and standard in place is not a substitution for the required actions, but it is a precondition for such steps, therefore the needed budgetary resources should be allocated for this purpose. It would be advisable to look into the possibility to get Hungarian manufacturing industries better involved in the production of measuring apparatuses (at present, supply of spare parts for the existing instruments poses a major problem).

2.5. Protection against noise and vibration

Over the last decades noise has become one of the most severe environmental harms affecting the population. Besides other measures proposed in the present study to combat noise pollution, in some cases direct state support is needed (to establish natural or artificial noise barriers, for instance).

2.6. Organizing integrated waste management

Nearly 104 million tons of waste is produced in Hungary a year. On the one hand, this causes severe environmental pollution, and on the other shows how wastefully raw materials are being used. It is an urgent task to reduce the amount of waste produced, to introduce selective waste collection, as well as to make reusing and recycling generally pursued practices. The new Act on Waste Management and the National Waste Management Plan (which is expected to be approved by the Hungarian Parliament soon) will contribute to alleviating the situation, but they are far from being sufficient to solve all the existing problems in this area. Hulladék Munkaszövetség (HUMUSZ) Hungarian environmental NGO has elaborated detailed proposals to address the issue of waste management, and we fully support the implementation of this concept.

2.7. Water and soil protection

The last few decades have seen a significant deterioration of water quality both in terms of underground and surface waters. Only 57 per cent of all Hungarian inhabitants have sewers installed, which is an important source of pollution, whereas nearly 97 per cent of the population has access to public utility water supply. The situation is further aggravated because a large part of the sewage is not or not adequately treated. Budapest and some major provincial towns are particularly lagging behind as far as waste water treatment is concerned. Soil quality has also become poorer in many areas. To improve this situation, the state budget should provide substantial direct financial support.

2.8. Support of the National Agrarian Environmental Protection Programme

Agricultural methods widely used in the past few decades are largely responsible for reduced biodiversity, degradation of soils, less varied and attractive landscapes, as well as for chemicals entering the food chain, often causing damage to health. The most important task today is to form a state-of-the-art, environmentally sound agrarian economy.

As a result of the anti-smoking campaigns and the ban on tobacco advertising, this destructive habit will hopefully lose ground among the population. With a view to rearranging the jobs of those now working in the tobacco industry and tobacco-growing, too, increased support should be given to organic agricultural production (e.g. in the Nyírség region in eastern Hungary).

Positive results of the programme would include thousands of new jobs and increasing volumes of surplus products, most of which would be sold in foreign markets. In this manner Hungary could also have access to substantial EU funds for this purpose. Extra support to the programme would lead to adding 100 thousand hectares to environmentally sound farming, with a surplus production worth some HUF 100 billion. This value is mostly made up of wages, so the state budget may increase its revenues by some HUF 30 to 40 billion.

2.9. Nature conservation; protection, improvement and extension of Hungary's forest-lands and the green areas of its settlements

It is essential to fulfil the tasks listed in the National Nature Conservation Primary Plan, which was prepared on the basis of Act LIII of 1996 on Nature protection. One of the most urgent tasks is to increase the total area of forest-lands to 20 per cent of Hungary's territory, and to 25 per cent in the long run. Protected natural areas should cover 12 per cent of the country's whole area. State budget contribution is indispensable to achieve the goals set in the Plan.

Green areas in towns and villages should primarily be protected and improved through indirect economic implements and appropriate legal regulations, but direct state support is also needed.

Considering the annual reports of state forest management companies, the aggregate annual profit from business activities of all Hungarian forest companies may be estimated at HUF 2 billion. Consequently, over and above the current subsidies, it would be enough to devote an additional HUF 2 billion to avoid the negative environmental impacts caused by profit-oriented activities of state forest management companies. Better enforcement of the ecological, protective and public welfare functions of state-owned forests may contribute to raising the living standard of local population, boosting tourism and related services, and reducing healthcare expenditures at the level of the society as a whole.

For the efficient management of socially-owned forests, it is essential to elaborate and operate an appropriate system of targets and implements. Nature protection requirements and expectations of the Hungarian society can only be fully met if these forest-lands are kept under state control and are managed along the lines of the above objectives. Financial basis for such operation can be secured partly from the sales revenues of timbering and partly from budgetary sources, as allocation for a state assignment. The latter part of the funds, estimated at about HUF 6 billion, should be allotted to forest management entities through contracts of administration, which are specified and controlled in detail. This task financing system will ensure equal operation for functions and services that cannot be placed on a market basis.

To achieve efficient operation of Hungarian forest management companies, they should be transformed into public service companies, and they should be provided with a contractual subsidy of HUF 8 billion per year, allocated from the state budget.

Privatization of even more state-owned forests cannot be a solution for the above problems, so we cannot support such policies. Today's practice unfortunately shows a rather short-term approach on the part of owners of private forests, who often manage their property aiming at a quick return on their invested capital. This has led to a growing share of forest plantations made up of trees which are not indigenous species in the given area, but grow fast and can be timbered after a relatively short period of time. In addition to that, under these management practices, the cutting age of the native tree species (e.g. Turkey oak) has also been lowered. One of the necessary preconditions of sustainable use is that short-term economic interests of owners should not clash with long-term objectives. Therefore we have taken the view that forest areas to be incorporated into the National Land Fund in the future, as well as land areas potentially suited to become afforested should also be taken under administration by the state or by non-profit organizations.

As regards the proportion of forest-lands within the total national area, Hungary is in the last position among European countries. This is another reason for changing the current situation as soon as possible.

2.10. Removal of long-term environmental damage and rehabilitation of contaminated areas

In conformity with the National Environmental Rehabilitation Programme, budgetary sources should provide most of the funding for removing long-term environmental damage and for rehabilitating contaminated areas, which belong to the scope of responsibility of the Hungarian state.

3. Elimination of subsidies granted to activities damaging the environment and human health

State subsidies are in many fields indispensable to keep a society functioning properly: e.g. in healthcare, education, research and development, or even in the case of public transport or disabled citizens. In these fields Hungary, due to its lower GDP, has increasingly dropped behind the practice of the EU. In some cases lack of organization and lower efficiency enlarge even more the gap between the standard of services in the EU and in Hungary.

However, all direct and indirect subsidies should be abolished immediately which finance seriously health-damaging and environment-polluting activities from public funds. This measure would comply with the principles of market economy and also with the expectations of the EU. (Owing to the lower wage costs, Hungarian enterprises can already today enjoy competitive advantages as against member states of the Union.) It is not advisable to continue with today's practice, referring to the alleged reason that Hungary will fall into a disadvantageous competitive position compared with other countries in the region if the subsidies are abolished. Defective price conditions, in fact, may lead to fixing the obsolete structures, making economic players grow lazy, neglecting continuous development and improvement of competitiveness.

Activities harmful to health and the environment place a huge burden on the Hungarian society. The part of the costs not borne by users or polluters is called external costs (externalities). These costs mostly hit the society as a whole and the next generations. It is therefore indispensable to incorporate all these external costs into the prices, preferably where they occur. Once these costs are included in the prices, economic efficiency and living conditions may be improved significantly in Hungary. At the same time these measures would cut back the profits harmful for the society, which are attainable today through polluting the environment.

We think that it is of crucial importance to eliminate as soon as possible the direct and indirect state subsidies that are at present being granted in Hungary to activities and products which seriously damage the environment and human health, use up non-renewable resources on a large scale and are sometimes closely connected to the black economy. Besides, related controls and penalties should also be made stricter. Currently in Hungary some environment-polluting activities gain extra profits by exploiting non-renewable natural resources, i.e. thereby they benefit from undeserved competitive advantages.

Implementation of an environmental state budget reform is made indispensable by the need to improve the general state of the environment, and to enforce economic rationality and social justice. Furthermore, it is required by Hungary's international commitments, as well as by several official documents of the EU, such as the Amsterdam Treaty of 1997. The OECD Council issued a guideline (No. C[72]128) as early as in 1972, which was followed by several documents and studies in later years. The guideline says:

"Natural resources are scarce as a rule, thus their use in production and consumption may lead to their deterioration. Unless the costs of that damage are incorporated into the prices, the market will not be able to reflect the scarcity of the resources either in a specific country or internationally. That is why measures are required to reduce pollution and allocate the resources in a more efficient manner by implementing product prices (which are connected to the quality and/or quantity of the resources used in their production) that reflect more precisely the relative scarcity of the resources, and to ensure that the economic participants concerned act accordingly. ...The «polluter pays» principle is an effective means of encouraging the more rational use of scarce natural resources and avoiding distortions in investment practices and in international trade. Therefore, it is a principle to apply when dividing the costs of

preventing and controlling pollution. This principle means that the polluter must pay for all the costs incurred during the implementation of the above measures taken by authorities to restore the environment to a reasonable state. Or, in other words, the prices of goods and services, the production and/or consumption of which cause environmental damage, must cover the costs of rehabilitating the environment."

We would like to emphasize that an environmental budget reform, if properly introduced, would not increase costs at the level of the national economy. It would only charge the already existing expenses to those who are responsible for those costs. As a result, it would enhance the overall efficiency of the Hungarian economy, which would bring about a lower aggregate cost level.

3. Transport

At present, prices of motor vehicle transport fail to cover all the costs involved, for instance, the costs of the environmental and health damage this sector produces. External costs need to be incorporated into the prices by all means; economic rationality and social justice, as well as Hungary's commitment to European standards require it. The Green Paper titled "Towards Fair and Efficient Pricing in Transport" published in 1995, and the White Paper titled "Fair Payment for Infrastructure Use" released in 1998 strongly manifest EU policies on transport. The documents clearly reveal that in each member country of the EU, a significant part of the road freight and passenger transport costs is not borne by the actual users of transport, and that these costs should eventually be enforced in transport prices.

A resolution (CEMT/CS[98]5/FINAL) adopted by the Conference of European Ministers of Transport (CEMT) in Copenhagen in May 1998 states that a large part of the losses and damage generated by transport is still not paid by the users of transportation services, and it calls for member countries, among them also Hungary, to start fully incorporating external costs into the prices as soon as possible. Such restructuring can only be achieved through imposing increased taxes and charges in a way that will not add to the aggregate volume of taxes to be borne by the Hungarian society. The resolution also underlines the responsibility of national governments to give sufficient information to the public enabling them to accept and support the incorporation of external costs into transport prices.

Our proposals are based on the theoretical and practical concept that the costs of environmental and other damage, up until now borne by the entire society (including, of course, the users), must be enforced in the prices.

Environmental damage caused by transport in Hungary is summarized in *Table 3*. Values in proportion to the GDP come from the ministry responsible for transport; HUF values calculated from GDP figures at official current exchange rate and at purchasing-power parity have been derived from the official data of the Hungarian Central Statistical Office for 2000.

Table 3.: Environmental damage caused by transport calculated on the basis of GDP in 2002 (billion HUF)

Damage caused by transport	Costs as a percentage of GDP		Costs at current prices						Purchasing-power-based costs					
			Total		Road		Railway		Total		Road		Railway	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
Accidents	1.5	2.0	255	340	226	301	29	39	576	767	510	680	66	87
Air pollution:														
local	1.0	1.3	170	221	162	210	8	10	384	499	366	475	18	23
other (outskirts of settlements)	0.3	0.5	51	85	45	74	6	11	115	192	101	168	14	24
Noise and vibration	0.8	1.0	136	170	110	138	26	32	307	384	249	311	58	73
Time lost	2.0	3.0	340	509	293	440	47	70	767	1151	662	994	105	158
Total:	5.6	7.8	951	1324	835	1163	116	162	2149	2993	1887	2628	262	366

Note: In 1999, Hungary's GDP as determined on a purchasing power basis was 2.26 times larger than the value calculated at the exchange rate.
In 2002, Hungary's GDP calculated at current prices was HUF 16,980 billion, while on a purchasing power basis it amounted to HUF 28,656.8 billion.

Source: Central Statistical Office of Hungary: International Statistical Yearbook 2003 and Hungarian Statistical Yearbook 2003

Table 3. illustrates that environmental damage attributable to transport is three or four times bigger than state budget revenues coming from taxes and charges levied on motor vehicles only (excise duties of fuels, motor vehicle tax imposed by local governments, etc.). Other types of taxes which are imposed on every product and service, such as VAT, should not be taken into consideration here, since they are supposed to cover the general expenses of the society as a whole, and are (or should be) shared by all branches of the economy in proportion to their performance – without these expenditures it would not be possible to sustain motor vehicle transport either.

We have to underline that figures in the table are far from covering all the external costs of transport. Among others, the loss and damage attributable to climate change resulting from greenhouse gas emissions or to land occupation for transport purposes have not been taken into account when calculating the figures, although the costs of removing them are not paid by the users of transport only. Damage due to reduced biodiversity is not included either. Furthermore, there are harms that indirectly arise from transport because they are produced by activities without which motor vehicle transport would not be able to exist at all (road construction, motorcar manufacturing, crude oil exploration and production – just to mention a few). An instructive example for the latter type of damage is the case of the tanker "Prestige", recently stranded near the Spanish coasts. The Ministry of Environment Protection in Austria has found that those indirectly involved industries consume 0.7 times as much energy as transportation itself. Assuming that environmental damage is proportional to energy consumption, figures of the environmental damage caused by transport should be multiplied by 1.7 to make them realistic.

Other calculations determine environmental harms and costs to be lower than the above values. However, even those estimates support the idea that environmental and other damage caused by transport well exceeds the amount of state revenues derived from this sector.

A study published by the Hungarian Institute for Transport Sciences reveals that total losses of the national economy resulting from road accidents amounted to HUF 55.2 billion in 1994, which is around HUF 165 billion at 2002 prices.

Objections are often raised that for example the taxes (and so the prices) of fuels should not (or cannot) be increased any further because wages in Hungary are lagging far behind those in Western Europe. By accepting those objections we would agree that the lives and health of Hungarians are worth much less than those of EU citizens. On the other hand, taxes on fuels need to be increased among other reasons just because in this way other tax-type burdens can be reduced, leaving room for raising the wages, and so making it possible to preserve or even improve the solvency of Hungarian citizens. Accordingly, extra revenues from fuel taxes should be entirely devoted to covering social security expenses.

Increasing fuel prices generate inflation, but only temporarily and very slightly. Beneficial impacts of the increase may offset the inflationary effect already after six months. Fuel costs represent only 3 per cent in the prices of Hungarian products as a rule; therefore, the average price level is not expected to grow much. (Fuel costs constitute only about 8 per cent even in the service fees of taxis in Budapest. Consequently, a fuel price rise of 50 per cent would only justify raising these tariffs by approximately 6 per cent. However, we estimate that a drop in the overall volume of road traffic would by far offset the negative impacts of that increase. Less traffic would reduce the fuel consumption of cabs by shortening the time spent in traffic jams, and more people would travel by taxi.) The inflationary impact caused by increased fuel prices can also be averted by diverting traffic from roads to railways, because railway transportation's (import-dependent) fuel costs are thirty times less for the same performance than those of road transportation.

Higher excise duties on fuels would discourage fuel consumption. Lower fuel consumption would contribute to protecting the environment, reducing the number of accidents, bettering the conditions of public and railway transport and also to improving the balance of foreign trade.

The situation of road freight transportation in Hungary is a copybook example of the consequences brought about by pampering an economic sector. Strong lobby interests of the sector are being enforced; as a result, freight transportation companies grow lazy, integrated logistical systems are not built up and the national economy's transport-intensity ratio does not improve either.

Hungarian road freight transportation companies are wrong when they argue that domestic carriers are already overburdened with taxes. The following facts support just the opposite:

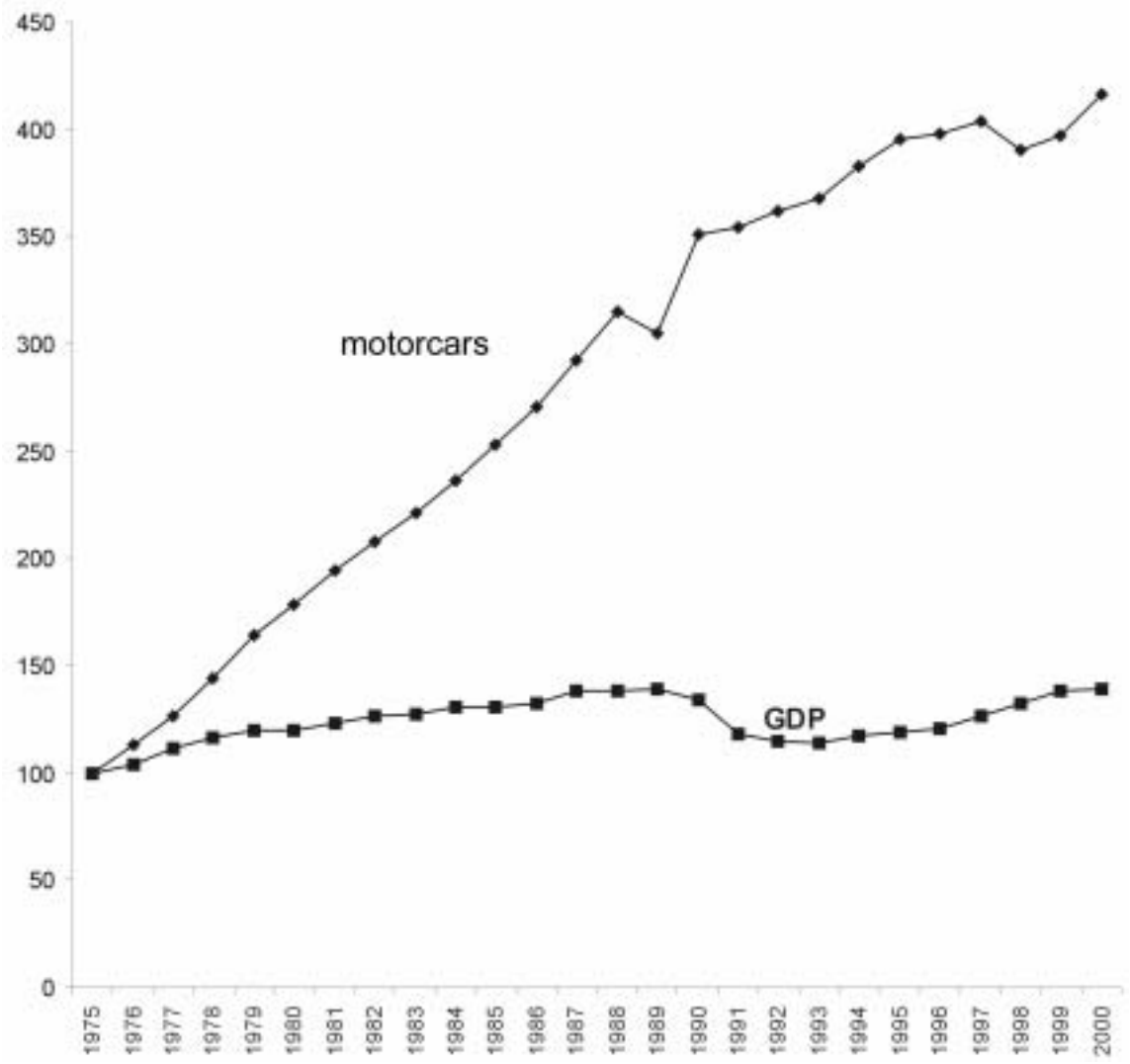
- Oversupply prevails in the Hungarian freight transportation market, while the national economy's specific transport-intensity is higher than the EU average. In 1998, freight transportation performance per one unit of GDP in Hungary was 1,352 freight ton-kilometres/EUR calculated at exchange rate, and 0.598 freight ton-kilometres/EUR calculated at purchasing power parity, whereas in the European Union this ratio was 0.455. Available data show that the index of specific transportation performance has considerably improved in Hungary since 1991, but even so it is still lagging behind the EU value. Therefore, with a view to the modernization of the Hungarian economy, it is essential to reduce the need for transportation.
- In Hungary, the share of the black and grey economies is much higher than in the EU, and this is particularly true for the road transportation sector. In the black economy, the spe-

cific transport-intensity ratio is extremely high, because this is partly a way to cover up the traces. A survey produced by the Hungarian Central Statistical Office (KSH) has found that 53 per cent of the total value of freight transportation services used by Hungarian households is performed without issuing any invoices on the completed work. (Source: "Hidden Economy in Hungary", published by KSH, Budapest, 1998)

- The EU's Green Paper mentioned above and a recent publication by the European Conference of Ministers of Transport (ECMT) titled *Efficient Transport for Europe – Policies for Internalization of External Costs* both reveal that road freight transportation companies do not pay the bulk of the costs they cause. These documents also demonstrate a commitment to find ways to change this situation and have the participants of the transport sector pay for the real costs of their activities. (Public transport, which is a public service, could be exempted from that requirement.) A practice which is contrary to the above principle distorts market conditions, and unjustly discriminates against some participants while favouring others undeservedly. Unless the prices reflect real costs, economic efficiency will be lower than what would otherwise be possible. (Hungary has had the chance to learn from the bitter experience of the past decades and see the consequences of unrealistic prices.)
- More environmentally friendly freight transportation modes (railway, fluvial) have been losing ground, which resulted in higher specific environmental loads due to transportation, i.e. external costs have been growing steadily.
- Prices of fuels and also a large part of other energy sources are mostly determined by the high (and ever-growing) prices of imports. In addition, the volume and share of these imports are also rising, owing to the depletion of Hungarian hydrocarbon sources. On the other hand, the price of domestic labour depends on the performance level it is capable of attaining in the domestic and external markets; therefore, the burdens imposed on labour need to be cut by all means.

Another argument against our proposals is that higher taxes would "put an end to road transportation" and so they would bring about significant losses for the economy. We have to refute this argument. In Hungary the number of motor vehicles has surged over the past few decades. This trend has gained even more speed recently: imports of motorcars increased by 31 per cent in 2001 compared to the previous year, amounting to 155 thousand. This number was further increased by 32 thousand Suzuki cars, assembled from imports for the domestic market. In 2002, the imports of motorcars, and within that particularly the imports of used motorcars, continued to rise rapidly, which was mainly prompted by the revaluation of the Hungarian currency and by the liberal regulation in force. However, the experience of recent years, as well as foreign analyses, evidence that rapidly growing numbers of motor vehicles do not necessarily mean that economic performance improves accordingly. Just the other way round; disproportionate growth of motor vehicle transport drains away resources from other areas that could more efficiently contribute to economic development. *Figure 3.* compares GDP and the number of motorcars in Hungary. This comparison demonstrates that the country's development does not depend on the number of motor vehicles.

Figure 3.: Gross domestic product and number of motorcars in Hungary between 1975 and 2000 (1975=100)



Source: Yearbooks of the Central Statistical Office of Hungary

Unlike transportation companies, we think that the "real end" of transport will come if taxes remain the same as today. Firstly, because environmental and health problems caused by transport may increase (and partly they have already increased) to a level that disables further economic development and seriously threatens even the normal functioning of the society as a whole. It is important to remember that damage may be increasing exponentially when traffic is growing. Secondly, the existing infrastructure is less and less sufficient to carry an ever-increasing number of motor vehicles. The capacity of the infrastructure, however, is very hard to be expanded for economic reasons (lack of, or insufficient, resources) and for physical ones (town and village settlement structures are not much flexible).

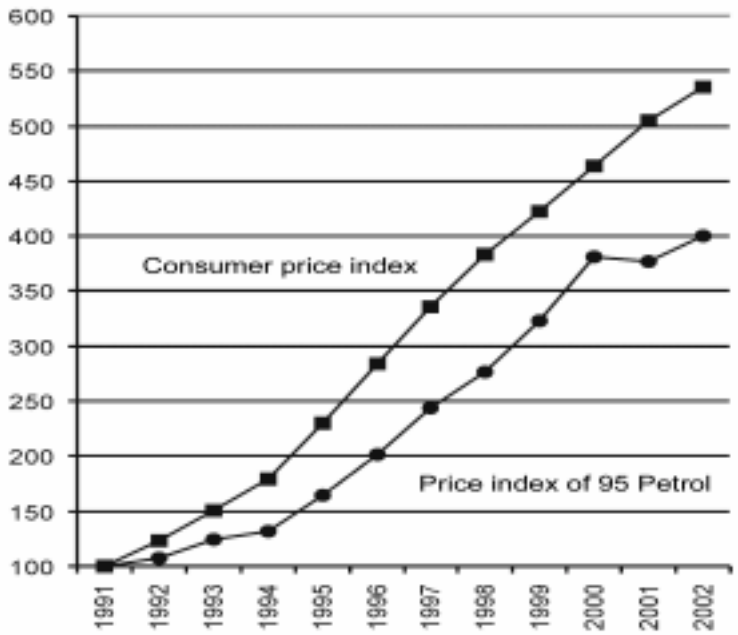
Another reason for increasing the taxes on motor vehicles (or at least adjusting them by the rate of inflation) is that it could open up ways to reduce taxes imposed on live labour, which has been a declared aim of the Government itself.

3.1. Valorization of excise duties on petrol

Petrol prices in Hungary have already almost reached the price level of relevant EU countries. During 2003, world market prices of hydrocarbons will presumably become stabilized at a lower level, which may bring about a drop in petrol prices. It would be justified to increase (or, to be more precise, to maintain the real value of) excise duties by the rate of the price reduction. Another reason to support such action is that wages should not be the sole financial sources of social security; higher taxes (excise duties and the connected VAT) on fuels could in part provide the funds, since fuel use is responsible for a considerable part of all health damage.

Excise duties of fuels have fallen at a particularly high rate in real value between 1998 and 2003. Figure *3.1.* illustrates that up until today, every successive Hungarian government pursued a practice in which consumption taxes (excise duties), and parallel with that petrol prices increased less than the average rate of inflation in each year. The governments, this way, were in fact granting regular allowances to a type of consumption which causes serious environmental pollution. This policy had an adverse impact on Hungary's balance of foreign trade, made economic restructuring more difficult to achieve, and contributed to the introduction of austerity measures which caused massive damage to the Hungarian society.

Figure 3.1.: Changes in the price of unleaded 95 Petrol and the consumer price index in Hungary (1991=100)



Source: Central Statistical Office of Hungary, MOL Co.

It is worth highlighting that in the past 15 years, petroleum prices were stabilized at a relatively low level, particularly if calculated at the real value of USD (dotted line in the Figure). This is why we recommended earlier that the consumption taxes of fuels should be raised.

In our opinion, an increase of excise duties lower than the rate of inflation is against the Constitution and other relevant legislation, for it promotes activities damaging our health and the environment. Consequently, the essence of such measures is discordant with the principles of the European Union, too.

The Hungarian Ministry of Finance had plans to raise the excise duty on petrol by 6 per cent in 2001 and by 4 per cent in 2002. Inflation was higher than planned in 2001 (9.2 per cent), and the consumer price increase was expected to come down to 5.5 per cent in 2002.

Combining the planned increase of excise duties for the years 2001 and 2002, this would have resulted in a rise of about 10 per cent for the two years in the aggregate, while the inflation rate was 16 per cent over the same period. Owing to the failure to valorize excise duties, the relative consumer price of fuels would have decreased by approximately 6 per cent. However, as a consequence of the threat by freight transportation interest groups, which is a serious violation of the Constitution and several laws, the Government did not raise the excise duties in 2001 despite the original provisions of the law. What is more, it even postponed the rise of 1st January 2002, also prescribed by the law, by six months, to 1st July 2002. Due to the threat, the arrearage in increasing the excise duties amounted to some 16 per cent as of 1st July 2002, which, indeed, would only have been a valorization. This also means that as a consequence of the lost tax revenues, funds available for healthcare, for instance, were reduced, whereas the ever-accelerating and wildly growing motorization is one of the main causes of health damage. According to our calculations, the amount of lost excise duty revenues due to the failure to valorize the excise duties under the pressure of the mentioned threats totalled nearly HUF 37 billion in 2001, and around HUF 63 billion in 2002 (also considering the shortfall in the rate). Therefore, all in all, lost excise duty revenues, calculated without interests, amounted to roughly HUF 100 billion. Excise duties have not been raised as of 1st January 2003 either, so the real value of this hidden subsidy increased even further (*see Table 3.1.*). From this amount, a considerable part of the problems in the Hungarian healthcare sector could have been solved, and so many human lives could have been made longer or better.

Table 3.1.: Changes in excise duties imposed on fuels

	Petrol			Diesel fuel			Consumer price (%)	Ratio of petrol/diesel fuel prices
	HUF/litre	nominal price	real price	HUF/litre	nominal price	real price		
1 Jan 1998	83.10	100.00	1.00	67.60	100.00	1.00	100.0	1.229
1 Jan 1999	86.90	104.57	0.9507	75.00	110.95	1.0086	110.0	1.159
1 Jan 2000	93.00	111.91	0.9266	80.20	118.64	0.9823	109.8	1.160
1 Jan 2001	93.00	111.91	0.8485	80.20	118.64	0.8995	109.2	1.160
1 Jan 2002	93.00			80.20			106.0	1.160
1 July 2002	102.50			85.00				1.206
Average of the year 2002	97.75	117.63	0.8414	82.60	122.19	0.8740	106.0	
2002/1998	117.63%		84.14%	122.19%		87.40%	139.81	

Source: MOL Co., Central Statistical Office of Hungary, excise duty laws

Clean Air Action Group submitted a petition to the Hungarian Court of Constitution, appealing against the modification of the tax law under the pressure of the blackmailing of road freight transportation interest groups. It is important to note that in the aftermath of the events of 11th September 2001, such blackmailing action by a narrow pressure group of road freight carriers can already be qualified as a type of terrorism. (Appendix 5 contains the petition submitted to the Court of Constitution.) Our proposal is to increase excise duties on petrol in the years that follow in a manner that Hungarian prices are adjusted to those in Austria, calculated at the official exchange rate. It could enable Hungary to adapt to pertinent EU policies and also to fulfil the commitments undertaken in the CEMT.

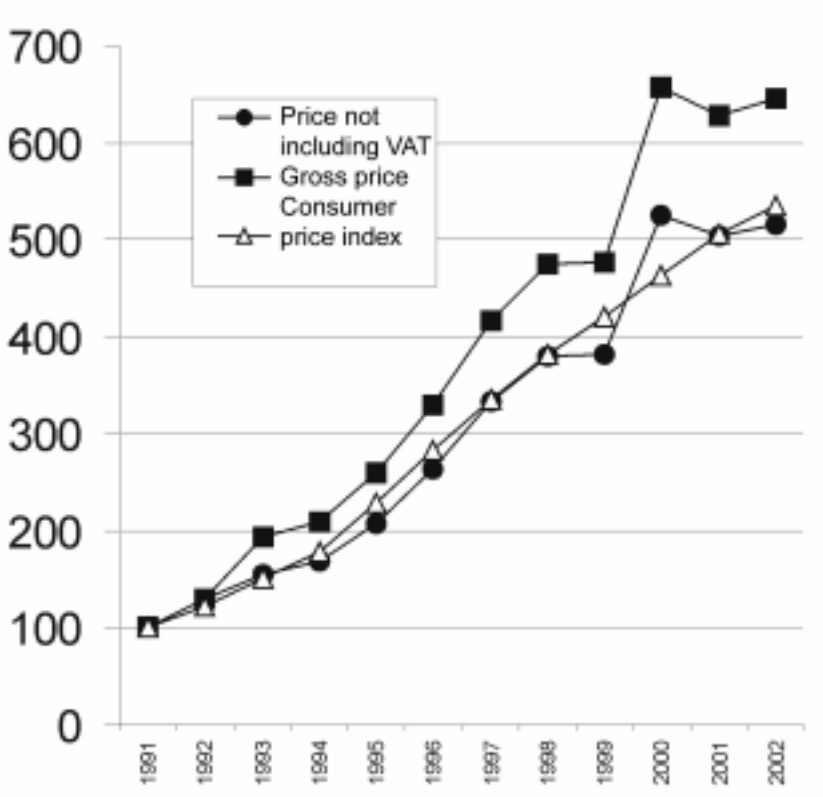
Owing to the revaluation of the Hungarian currency and the weakening USD (purchase of hydrocarbons is predominantly effected in USD), the Hungarian fuel price has practically reached the Austrian level; therefore under the present conditions we cannot propose a price rise. For that reason, other methods should be applied to incorporate the external costs of the now cheaper road transport into the prices. So it would be particularly opportune to take such measures now.

3.2. Increased excise duties on diesel fuel

In theory, excise duties on diesel fuel should be of the same level as those on petrol. There are no rational reasons whatsoever why diesel fuel excise duties should be set lower than the duties on petrol. Rationality would rather justify the opposite.

Figure 3.2. illustrates the changes in the price of diesel fuel.

Figure 3.2.: Changes in the price of diesel fuel
1990=100



Source: MOL Co., Central Statistical Office of Hungary

One of the most important reasons for abolishing the preferred status of diesel fuel is that latest research findings reveal that exhaust gases from diesel engines pose in general much more health and environmental hazards than those from petrol-operated engines. (The UN World Health Organisation does not set air quality limit values for diesel exhaust gases because they have not found any concentration below which these emissions will surely not damage human health.) Another reason for adjusting the excise duty rates is that diesel fuel is mostly used by trucks and other heavy motor vehicles that damage the roads to a much higher extent than cars do. Consequently, at present there is a huge cross-financing in Hungary, at the expense of those using petrol-operated motor vehicles. This practice distorts market competition and increases environment pollution.

Transport companies can reclaim the VAT content of their invoices on diesel fuel, which is another preference for the use of diesel fuel. However, VAT can be reclaimed in the case of all kinds of products purchased for use in manufacturing or service industries and it is in line with EU practice as well, therefore we cannot propose the abolition of this possibility. Nevertheless, we think that the fact should be remembered. What is important to note is that the rate of VAT on fuels is higher in Hungary than generally in the EU countries (it is 20 per cent in

Austria, for instance), therefore the reclaimable part is larger, which means a comparative preference. We do not propose that the 25 per cent Hungarian VAT rate be reduced – rather, it is presented as an argument in favour of increasing the excise duty on diesel fuel.

Excise duties introduced in 1998 included the contribution payable into the Road Fund and the environmental product charge. These two items had been set as percentage rates at the time. Accordingly, we calculated that the rate of the Road Fund contribution amounted to 26.32 per cent of the excise duties paid on fuels after 1998. Environmental product charges represent 3 per cent of the applicable excise duties. So the absolute values of both the Road Fund contribution and the environmental product charge depended also on the type of the fuel. Although the Road Fund does not exist any more, all this proves again that the practice of applying different tax rates for petrol and diesel fuel is contrary to the principle of sharing proportionately the burden of taxation.

It is important to note that the proposed increase of the excise duty of diesel fuel would not affect agricultural activities, for the entire amount of the duties is refunded in this sector.

We are well aware that at present, bringing the excise duty rates of petrol and diesel fuel to a uniform level is not feasible in Hungary because of the expected political and economic consequences, and also because the current Hungarian diesel fuel price already surpasses the Austrian level (although the rate of the reclaimable VAT is higher in Hungary than in Austria). Achievement of a uniform excise duty rate for the two fuel types in the future, however, should also be promoted by raising the excise duty of diesel fuel at the same percentage rate as that of the petrol.

Based on the above reasons we recommended that as of 1st July 2002 the excise duty on diesel fuel should be increased at the same rate as the duty on petrol, i.e. by 16 per cent. In 2002 (only considering the impact of a six-month period) this could have brought extra revenues worth HUF 13 billion for the state budget as compared to the estimates.

Despite the facts we have described above, the excise duty on diesel fuel was finally set – upon the Government's proposal – at the rate of only 85.00 HUF/litre, i.e. the lower version, in contradiction of the law which was in force up until 1st July 2002. Originally the duty would have been raised to 88.40 HUF/litre from the current 80.20 HUF/litre. This decision was the result of the pressure from road freight transportation companies.

It is particularly noteworthy that in recent years, when adjustment to EU standards has been given more emphasis, the real value of excise duties on fuels has been decreasing considerably in Hungary.

Data in *Table 3.2.* clearly demonstrate that environmentally polluting activities are given ever-increasing subsidies through tax allowances. According to the estimate in the Act on the State Budget, revenues from excise duties on fuels will total HUF 384 billion in 2003. From this figure we may easily calculate that the real value loss of excise duties means **additional subsidies** (contributing to the deterioration of the Hungarian economic structure) **of** nearly **HUF 50 billion** for transport activities which pose serious loads on the environment. If the rate of the excise duty does not go up by a further 5 per cent (in line with the rate of inflation) in 2003, the amount of the mentioned subsidy will reach approximately HUF 67 billion. This is very problematical, considering that the healthcare sector is lacking these funds, when subsidies are just being granted to environment pollution which has detrimental effects on human health – so the adverse impact is doubled.

Table 3.2.: Changes in excise duties imposed on fuels

	Petrol			Diesel fuel			Consumer price (%)	Ratio of petrol/diesel fuel prices
	HUF/litre	nominal price	real price	HUF/litre	nominal price	real price		
1 Jan 1998	83.10	100.00	1.00	67.60	100.00	1.00	100.0	1.229
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1 Jan 2000	93.00	111.91	0.9266	80.20	118.64	0.9823	109.8	1.160
1 Jan 2001	93.00	111.91	0.8485	80.20	118.64	0.8995	109.2	1.160
1 Jan 2002	93.00			80.20			106.0	1.160
1 July 2002	102.50			85.00				1.206
Average of the year 2002	97.75	117.63	0.8414	82.60	122.19	0.8740	106.0	
2002/1998	117.63%		84.14%	122.19%		87.40%	139.81	

Source: MOL Co., Central Statistical Office of Hungary, excise duty laws

Despite all these weighty reasons we cannot propose that the excise duties of fuels be raised in 2004. It is because regarding such measures, Hungary should preferably follow the practice of the neighbouring EU member states (primarily that of Austria). Nevertheless, we keep strongly opposing to any reduction in fuel taxes.

3.3. Imposing excise duties and VAT on fuels entering Hungary in fuel tanks of motor vehicles

As demonstrated in *Tables 3.3.*, fuel prices are lower in neighbouring countries (except for Austria) than in Hungary. This difference is particularly large in the case of the Ukraine and Romania. Based on this price difference, fuel tourism and fuel smuggling have grown to huge proportions. This is confirmed by information received from Hungarian customs authorities and by relevant news releases regularly published in the press, although the actual dimension of those activities is difficult to assess. (Fuel smuggling is defined as an activity when fuels are brought illegally into the country, or are brought in legally, but resold illegally. By fuel tourism we mean that fuels are brought into the country legally and are used legally for own purposes, but the border-crossing trip is made primarily or largely with a view to purchasing fuels.)

Table 3.3.: Fuels imported in the tanks of motor vehicles in 2001
a) buses and trucks (diesel fuel)

Frontier section	Diesel fuel price (HUF/litre)	Difference compared to Hungarian fuel price (HUF/litre)	Total number of entries (in thousands)	Imported diesel fuel (million litres)**	Lost Hungarian revenues* (million HUF)
Hungarian-Ukrainian	105.00	108.00	69	42	5287
Hungarian-Romanian	125.40	87.60	434	261	33037
Hungarian-Croatian	193.00	20.00	224	134	17007
Hungarian-Slovenian	185.00	28.00	131	79	9971
Hungarian-Slovak	191.30	21.70	516	310	39270
Hungarian-Yugoslavian	130.00	83.00	139	84	10595
Hungarian-Austrian	215.00	-2.00	895		0
Total:			2409	908	115167

*Lost revenues: excise duties, stockpiling fees and VAT, **In the case of fuel tanks of 600 litres

Table 3.3.: Fuels imported in the tanks of motor vehicles in 2001
b) motorcars (petrol)

Frontier section	Petrol price (HUF/litre)	Difference compared to Hungarian fuel price (HUF/litre)	Total number of entries (in thousands)	Imported petrol (million litres)**	Lost Hungarian revenues* (million HUF)
Hungarian-Ukrainian	113.00	136.50	1480	118	17386
Hungarian-Romanian	145.10	104.40	1719	138	20197
Hungarian-Croatian	253.40	-3.90	1099		
Hungarian-Slovenian	220.50	29.00	368	26	3782
Hungarian-Slovak	216.20	33.30	1973	138	20278
Hungarian-Yugoslavian	215.00	34.50	989	69	10168
Hungarian-Austrian	265.60	-16.10	4500		
Total:			12129	489	71811

Price level of 17th May 2001
*Lost revenues: excise duties, stockpiling fees and VAT
**In the case of fuel tanks of 70 litres
Source: Central Statistical Office of Hungary, MOL Co., tax laws

We can estimate fairly precisely the quantity of fuel entering Hungary in the original factory-built fuel tanks of motorcars, trucks and buses. (Most of that quantity, of course, does not belong to the sphere of fuel tourism or fuel smuggling, because it is brought into the country as part of the customary motor vehicle traffic, but even so, this activity obviously represents a case of evading the constitutional obligation to share proportionately the burdens of taxation.) We have found that in consequence of such fuel imports, annual **incomes worth at least HUF 80 billion are generated illegally, while the Hungarian state budget loses revenues totalling HUF 180 billion**. (*See in Tables 3.3.*) Our iterative model calculations, based on official statistical data, show that Hungarian citizens import around 287 million litres of fuels, while foreigners bring into the country some 792 million litres every year from countries where fuel prices are lower than in Hungary. The Hungarian state budget loses HUF 40 billion on the former type of traffic, and HUF 106 billion on the latter. (We based our calculation on the number of border-crossings in 2000, and determined the HUF value at concurrent – therefore comparable – prices of 17th May 2001. In the calculations we only took into account 70 litres of fuel per entry for motorcars, and 600 litres for trucks and buses.)

We repeated the model calculation using traffic data of the National Board of Customs and Excise Guard for 2001, and arrived at similar results. Nearly 1.4 billion litres of fuels were brought into Hungary, lost revenues of the state budget totalled HUF 187 billion and illegal incomes amounted to HUF 84 billion. It is worth noting that two important factors have changed:

Firstly, fuel prices have been raised in Romania, therefore illegal incomes have dropped, and secondly, the embargo on Yugoslavia has been removed, so former fuel exports have been replaced by fuel imports.

In *Tables 3.3.* we took into account not only the motor vehicles which enter the country specifically to purchase fuel (fuel tourism), but all entering vehicles. Although we do not have data regarding the share of the former traffic category within the total number of entering vehicles, but on the basis of information obtained from the Hungarian customs authorities (which we compared with data of the Central Statistical Office) we may conclude that their number is definitely very large. On the other hand, even motor vehicles entering Hungary for other purposes fill up their fuel tanks before crossing the border – as a consequence, the state budget, once again, loses substantial revenues. Additional environment pollution resulting

from such activities also increases the damage caused, partly because fuel quality in some neighbouring countries is inferior to fuels sold in Hungary. For non-standard fuels, however, higher tax rates are in force, therefore upon these fuels higher excise duties should be imposed.

We have probably largely underestimated the quantity of imported fuels, for we calculated with an average of 70 litres of fuels for motorcars, and with 600 litres for trucks. Customs authorities, however, have reported that Mercedes cars with factory-mounted fuel tanks of 100 litres can often be seen in the eastern border section of Hungary, what is more, all-terrain "motorcars" with original fuel tanks of 400 litres appear there ever more frequently. As regards buses and heavy trucks, the originally mounted fuel tanks often have much larger capacities than 200 litres – there are even some vehicles with tanks holding more than 1000 litres of fuel.

We have been told that buses were found with additional "secret" 1000-litre fuel tanks built into the vehicles besides the original tanks to cross the border with this double fuel load. In addition to violating customs and excise laws, such practice seriously endangers the safety of passengers and the participants of transport, therefore much stricter controls and penalties (including also the immediate confiscation of the vehicle) should be applied.

With a view to cutting back fuel tourism and fuel smuggling we had proposed as an initial measure to have excise duties and VAT paid on the quantity of petrol or diesel fuel corresponding to the fuel tank capacity of the vehicle concerned in each case when the motor vehicle crosses the border more than once a day. We were glad to see that in 1999 the Government modified the implementation decree of the Customs Act to the effect that the same person is entitled to bring fuel into the country free of customs duties only once a day. We hope that this provision will in effect be enforced and the necessary monitoring system will be in place. It gives cause for alarm, however, that customs authorities can experience ever more frequently that the same vehicle – with different drivers – crosses the border several times a day.

Unfortunately, other adverse trends have also emerged recently. By virtue of Art. 105 of Act C of 1995 on Customs Legislation, Customs Procedures and Customs Authority, up until now at most 200 litres of fuels were allowed to be brought into Hungary free of customs duties even in the original factory-mounted fuel tanks of motor vehicles, without the right to sell those fuels. Sadly, authorities have not been able to adequately enforce this regulation. On the one hand, controls have been insufficient, and on the other, various bilateral road transport agreements granted exemptions from the 200-litre restriction to road freight transportation companies of ever more countries – as a result, by 2000 this regulation has become applicable virtually only for Hungarian transport companies. Act XXXII of 2000, however, annulled even this light restriction. Our calculations reveal that in consequence of that, the Hungarian state loses additional revenues of at least HUF 9 billion a year if traffic volumes remain unchanged (*see Tables 3.3.*). But we have strong reasons to assume that in the new situation, also Hungarian road freight transportation companies will join this "business" on a larger scale, which will further increase the losses of the state budget. It is because there is an extremely strong motivation in the "fuel business": an out-and-home trip over the Ukrainian border with a fuel tank of 800 litres, for instance, allows earning HUF 120 thousand.

According to the agreement between Hungary and the EU, concluded in 2001, bringing fuels in the tanks of motor vehicles into the territory of the other contracting party is exempted from payment of any customs duties, taxes and charges. This means that even those very light legal regulations (partly adopted in 2000) had to be repealed, by which the Hungarian state had attempted to restrict fuel smuggling.

One of those regulations was a modification of the Customs Act's implementation decree, adopted by the Government in December 2000, which says: "Fuels brought into the country in the original factory-built fuel tanks of motor vehicles may be cleared through the customs for domestic traffic free of duties the first time that a given vehicle crosses the border on a particular day. On the occasion of further entries on the same day, fuels may be cleared

through the customs free of duties if those applying for customs clearance can certify by receipts or invoices that the fuel was purchased in Hungary."

Practical experience has shown that the modified decree was not successful in achieving its intended aim. On the one hand, the restriction is only applicable to persons and not to vehicles, so the same vehicle will cross the border several times a day with different drivers in the future, too. But even this scheme is becoming unnecessary. We have been informed by inhabitants living near the state border that today already children are employed to collect receipts and invoices at Hungarian petrol stations. The planned modification of the regulation means providing more favourable statutory conditions for smuggling, which is tantamount to granting open state support for organized criminal activities.

Besides its unfavourable economic impacts, fuel tourism causes further damage to the environment as well. The ensuing unnecessary extra motor vehicle traffic adds to the congestion on the roads, which in turn leads to more accidents, accelerates the deterioration of the roads and exacerbates environment pollution. Part of the fuels sold in the Eastern European countries does not meet Hungarian and EU standards, i.e. these are low quality fuels which cause increased environment pollution and health damage. These unfavourable environmental and economic impacts affect not only Hungary, but also the EU countries, because a considerable part of such illegally imported fuels is used by these motor vehicles in member states of the Community.

Consequently, what is needed here is to implement a comprehensive Europe-wide harmonization of the fuel prices. The European Union should make it clear for European countries and governments that it does not accept the practice of granting indirect support to road transportation in the form of low fuel taxes. Until this does not effectively happen, further restrictions are needed to prevent fuel tourism and fuel smuggling.

Tables 3.3. also reveal that losses of the state budget on diesel fuel alone may exceed HUF 115 billion, when calculating with an average fuel tank capacity of 600 litres for Hungarian and foreign trucks. Taking into account all motorcars and trucks, losses resulting from the "preferential" import of petrol and diesel fuel may surpass HUF 187 billion.

Gradual relaxation of the regulations restricting fuel smuggling indicates that organized crime has managed to find collaborating partners in the Hungarian public administration. We have been informed that at the time of modifying the relevant part of the Customs Act, some competent intermediate-level civil servants, in charge of public road and financial administration tasks, failed to inform decision-makers on the expected impacts of the planned modification, particularly as regards numerical data of the quantities involved. All this just accentuates the requirement that every official who participated in this disgraceful process should be removed immediately from the Hungarian public administration. We think that it would also be advisable to publish the names of these civil servants.

3.4. Valorization, increase and better collection of motor vehicle taxes

Act LXXXII of 1991 says that motor vehicle taxes are meant "to ensure that public burdens related to motor vehicle use are shared in a more reasonable and fair manner, to increase the revenues of local governments (of Hungarian settlements and of the capital districts), as well as to provide more funds for maintaining and improving the country's road network". We can fully agree with the concept, but we also have to say that motor vehicle taxes in Hungary are yet to meet the objectives described in the law, because:

- the rate of motor vehicle taxes is by far lower than the level necessary to accomplish the goals set in the law,
- motor vehicles registered outside Hungary make a disproportionately small contribution, as compared to domestic motor vehicles, towards attaining the mentioned objectives,

- lorries and trucks have an unreasonably small share of the burdens (as opposed to cars), and therefore fail to adequately contribute to meeting the objectives,
- thirty to forty per cent of all motor vehicle owners fail to pay their taxes.

We think that in this field one of the most pressing tasks is to increase considerably the ratio of motor vehicle taxes effectively paid in by vehicle owners. It is unacceptable for economic, environmental and ethical reasons that around one third of Hungarian motor vehicle owners can evade paying these taxes practically without any sanctions or consequences. As a result, the state budget and the local governments lose revenues worth several billions of HUF every year. It is essential to elaborate efficient methods that enable local governments to improve the motor vehicle tax payment ratio significantly without adding to the costs of collecting the taxes. It is worth considering that **the Hungarian Tax and Financial Auditing Office (APEH) should collect the motor vehicle taxes, too**. The Tax and Financial Auditing Office would be able to collect these taxes by using the motor vehicle registry of the Ministry of the Interior, and **so, besides extra tax revenues, local governments could also save several billions of HUF in tax-collecting costs.** (The Hungarian State Audit Office's report on tax revenues of local governments reveals that tax-collecting costs are extremely high as a rule, in some cases even surpassing the amount of the collected taxes.) The funds raised from collecting the motor vehicle taxes should be devoted to increasing the subsidies granted to local governments. This is justified and reasonable because motor vehicles, and particularly heavy motor vehicles, cause enormous damage to the infrastructure under local government management and to the stock of buildings.

The rate of motor vehicle taxes did not change between 1996 and 1998, whereas in the same period the inflation rate was 61 per cent in Hungary. In 1999, the lowest tax rate was raised by 50 per cent, and the highest rate by 67 per cent. On the other hand, no further increases have been implemented in either 2000, 2001 or 2002, despite the fact that the inflation rate was still 29 per cent. This provides further justification for a substantial increase of tax rates.

Motor vehicles damage the environment in various forms, not only when they are "on the move". Land occupation by vehicles poses ever-increasing problems, cleaning and maintenance cause severe pollution, not to mention the massive environmental load resulting from constructing and maintaining the related auxiliary industries and the required infrastructure. Therefore, taxes should not only be imposed with a view to covering the variable costs of transport (such as fuel taxes), but also to covering the fixed costs (e.g. motor vehicle taxes).

Revenues and funds to cover the fixed costs of transport (including most of the costs of maintaining and improving the infrastructure) are currently lagging behind the necessary level. For instance, much more resources should have been spent in recent decades on the nation-wide road network of 30,000 kilometres. Secondary roads under local government management, having a total length of over 100,000 kilometres, have also accumulated a huge backlog of maintenance and development work.

Lorries and trucks damage and destroy the roads and other structures to a much greater extent than cars do. Specialists had already formulated their definite view on the subject some decades ago. In 1971, Dr. Ervin Nemesdy university professor, Academic Doctor of Technical Sciences, published in Budapest his work titled "Structure of Roads and Motorways", which, even today, is used by transport specialists as a standard work on the subject. In his book Dr. Nemesdy describes, among others, the results produced by comprehensive investigations carried out in the United States of America, which demonstrated that road damage is proportionate to the fifth power of the axle load. This led the author to the following conclusion*: "...not only the interests of the road freight transportation companies should be taken into consideration, but also the state of the national road network and the unfavourable changes in the useful life of road surfaces, which may cause such amount of damage to the country's road network that is by an order of magnitude larger than the annual profits realized by transportation companies. (...) An axle of 10 Mp (...) is equivalent to the passage and*

useful life reducing impact of seven times as many 8 Mp axles. (...) All these reasons make it indispensable that heavy trucks with large axle weights should bear very high additional road charges and extra transportation taxes." Damage caused to roads is proportionate to the fifth power of the axle load; therefore, one heavy truck causes the same amount of damage to the roads as several hundred thousand motorcars. Lorries and trucks, therefore, should be taxed progressively. The current practice is contrary to both the Constitution and the Act against Unfair Market Competition, because motorcar owners and users of other motor vehicles are made to pay for the road damage caused by heavy trucks. This cross-financing arrangement should be abandoned.

We recommend that the rate of motor vehicle taxes should be modified as follows:

(1) We have maintained our proposal for a long time that motor vehicle taxes should be made uniform, i.e. they should not have a lower and an upper limit rate. It is both unfair and unreasonable that motor vehicle owners pay this type of tax depending on the decision of a given local government. We welcome that the Government has accepted our proposal, and as of 2004 taxation is made accordingly.

It is to be noted that lorries and trucks worth USD 3,620 million have been imported into Hungary over the past eleven years. As a consequence of the reduction of customs duties between the EU and Hungary, road freight transportation companies saved duties totalling HUF 122 billion between 1995 and 2001. In the same period, owing to the revaluation of the Hungarian currency, these companies paid by an additional HUF 136 billion less for their imports than what they would have paid if the exchange rate of 1995 had remained the same. Most of these motor vehicles were purchased second-hand, which caused and is still causing severe environment pollution. It is by all means necessary that lorries and trucks meet state-of-the-art environmental standards. However, achievement of this aim should not be promoted by granting tax allowances like the ones mentioned above, but through a practice of issuing licenses only for vehicles meeting strict environmental requirements. We believe that this is a much more efficient method environmentally, and at the same time it saves resources for the state budget. It is worth remembering that the current tax allowance is granted for meeting environmental requirements that are compulsory for any new motor vehicle to be put into service anyway.

3.5. Imposing infrastructure charges on heavy trucks in compliance with the principle of competition under equal terms

In its new transport policy adopted in 2001, the European Union underlined that heavy trucks cause serious damage to roads: *"Maintenance of motorways would cost six times less, if they were only used by cars. This advantage is not offset by any acceptable differentiation of pecuniary charges paid by trucks and cars respectively."* Accordingly, the EU urges that user charges proportionate to road utilization should be elaborated and introduced.

Damage caused to roads is proportionate to the fifth power of the axle load. *"...not only the interests of the road freight transportation companies should be taken into consideration, but also the state of the national road network and the unfavourable changes in the useful life of road surfaces, which may cause such amount of damage to the country's road network that is by an order of magnitude larger than the annual profits realized by transportation companies. (...) An axle of 10 Mp (...) is equivalent to the passage and useful life reducing impact of seven times as many 8 Mp axles. (...) All these reasons make it indispensable that heavy trucks with large axle weights should bear very high additional road charges and extra transportation taxes."* (Dr. Ervin Nemesdy university professor, Academic Doctor of Technical Sciences:

"Structure of Roads and Motorways. Technology – Construction". Műszaki Könyvkiadó, Budapest, 1971, p.55).

It is particularly urgent to revalorize the taxes imposed on foreign trucks. The European Union approved this step in writing, i.e. that the rate of this tax be maintained at its original value by adjusting it to changes in the HUF/EUR exchange rate. The tax rate was originally set in 1992 (at a value of 3 HUF/ton-kilometre), and has not been adjusted to the inflation rate since that time. Taking into account the average National Bank of Hungary exchange rate of the year 2001 (256.70 HUF = 1 EUR), the tax should be raised to the rate of 7.54 HUF per ton-kilometre. To make things even worse, as a consequence of various bilateral agreements, more than 90 per cent of foreign trucks are currently traversing Hungary without paying even the original tax of 3 HUF. At the same time these vehicles cause enormous damage to the environment, roads and human health: a study commissioned by the European Federation for Transport and Environment reveals that trucks cause damage worth over HUF 100 billion in Hungary every year, which is left unpaid. This calculation is proved to be correct by another study prepared by the European Conference of Ministers of Transport (Efficient Transport for Europe, OECD, 1998). Using data from this survey for reckoning up the value of the damage caused, we have arrived at an annual figure of HUF 140 billion at 2000 prices. Trucks registered outside Hungary cause damage to the environment and use the infrastructure financed from public funds in Hungary just like their Hungarian counterparts do. In fact, these vehicles are heavier on average than Hungarian trucks are; therefore they damage the Hungarian road network to a greater extent. Additionally, the negative impacts of the load they place on Hungarian roads are multiplied in certain periods when foreign trucks flow into the country in large numbers (e.g. early and late summer, during weekends, etc.). (In relation to the subject see also Clean Air Action Group's view on motorway tolls in Section 2.7.3.9.)

In 2001, 1264.5 thousand foreign trucks entered Hungary, while in 2002 their number already increased to 1339.0 thousand. Calculating with an increment similar to that of 2002, the Hungarian state could collect taxes worth nearly HUF 98 billion in 2003, following the revalorization of the tax and the abolition of current allowances. In contrast, the State Budget Bill reckoned with unchanged annual revenues worth HUF 2.2 billion from this source between 2001 and 2002. As a result, **foreign trucks are granted hidden subsidies in the annual value of nearly HUF 93 billion, which virtually equals the amount of the damage they cause**. (In other words: if the tax originally set in 1992 was collected in full at real value, then the owners of the trucks concerned would in fact pay for the financially quantifiable damage they cause.) In the period between 1992 and 2001, the amount of uncollected road charges totalled EUR 2741 million, which is more than the aggregate value of all types of subsidies and aids that Hungary received from the EU. *For details see Table 3.5.*

Table 3.5.: Motor vehicle tax (road charge) of foreign trucks entering Hungary

Year	Number of trucks (thousand)*	Tax** (HUF/ton–kilometre)	Exchange rate (HUF/ECU, HUF/EUR)	Payable tax	Paid tax***	Unpaid tax	Unpaid tax
				in billion HUF			(million EUR)
1989	363.1		65.07				
1990	441.0		80.48				
1991	588.0		92.70				
1992	773.2	3.00	102.10	23.2	2.0	21.2	208
1993	668.5	3.16	107.50	21.1	2.0	19.1	178
1994	778.7	3.67	124.78	28.6	2.0	26.6	213
1995	872.5	4.78	162.65	41.7	2.0	39.7	244
1996	947.8	5.62	191.15	53.2	2.0	51.2	268
1997	1098.4	6.20	210.93	68.1	2.0	66.1	313
1998	1180.6	7.08	240.98	83.6	2.0	81.6	339
1999	1056.2	7.43	252.80	78.5	2.7	75.8	300
2000	1128.2	7.64	260.04	86.2	3.1	83.1	320
2001	1264.5	7.54	256.70	95.4	3.1	92.3	359
2002	1339.0	7.14	242.97	95.6	3.1	92.5	381
2003	1417.9	6.91	235.01	97.9	2.5	95.4	406
Total	11107.6			773.0	28.5	744.5	3528

Notes:
*Number of trucks with foreign registration number entering Hungary, according to data contained in Yearbooks of the Central Statistical Office of Hungary
**In 1992: 3 HUF/ton-kilometre; afterwards revalorized by changing ECU and EUR exchange rates in accordance with Act LXXXII of 1991 and Act I of 1994
***For years 1993–1998: partly estimated on the basis of many years' average
Base for the calculation of the tax: 25 tons and 400 kilometres on average, and revalorized unit tax
Source: Central Statistical Office of Hungary, road charge law

By virtue of the agreement concluded with the European Union, however, Hungary cannot impose any motor vehicle taxes on trucks registered in the EU. Nevertheless, the Union does not oppose (on the contrary, it rather supports) that Hungary levies infrastructure charges on trucks. This was confirmed by the letter of the European Commission's Directorate-General of Transport and Energy written in reply to the European Federation for Transport and Environment. (This exchange of letters was initiated by Clean Air Action Group.) Consequently, Hungary has to impose the tax as an infrastructure charge. It is similarly an EU requirement that the charge should be imposed in a manner complying with the principle of competition under equal terms. This means that no carriers of any particular country or enterprise should be given preference over other carriers or be discriminated against. For that reason, the charge should be levied on Hungarian trucks as well.

In accordance with the above considerations, we propose that in 2003 an additional charge of 3 HUF per ton-kilometre as per the permitted total weight of the vehicle concerned should be levied on trucks of a permitted total weight of over 12 tons. We recommend that this charge should be increased by 2 HUF annually up until 2007, and afterwards its rate should be revalorized every year. Such measure would improve the position of the much more environmentally friendly railway freight transportation just in the sector where it is especially justified: in the transportation of large quantities of goods for long distances. It would mostly affect foreign freight transportation companies; thus creating a competitive advantage for Hungarian carriers in a fashion that is acceptable in the EU.

By introducing an infrastructure charge, Hungary would follow the example of Switzerland. A referendum held there in 1999 decided that a uniform road charge of a relatively high rate was to be imposed on trucks. The road charge scheme, also approved by the EU, was introduced in January 2001. The payable rate of the charge depends on the distance covered, on the permitted total weight of the vehicle concerned (which is an incentive to use the truck's capacity as efficiently as possible) and on the emission of air polluting substances. An essential feature of the system is that the charges have to be paid on all types of roads, not just on motorways. Furthermore, the rate of this road charge is significantly higher than the currently applicable or planned road charges of the European Union.

Road charges payable by trucks are being introduced in an ever increasing number of countries. As of August 2003, vehicles above a permitted total weight of 12 tons have to pay 15 to 17 Euro cents (37 to 42 HUF) per kilometre on every motorway in Germany, and this charge is projected to be raised further from 2004 on. In Austria, as of 1st January 2004, a road charge of 15 to 20 Euro cents (37 to 49 HUF) per kilometre is planned to be levied on vehicles above a weight of 3.5 tons.

3.6. Imposing highly progressive road charges on motor vehicles with axle loads above 10 tons

A decree of the Hungarian Ministry of Transport, Telecommunications and Water Management (No. 4/1999 [II.12.]) on Participation of Vehicles Surpassing Certain Total Weight, Axle Load and Dimensions in Public Road Traffic, on the Conditions of Road Administration and Public Authority Proceedings, as well as of Payment of Charges regulates the issue of payment of charges applicable to vehicles with an axle load exceeding 10 tons. These charges, however, are far from covering the damage and other costs caused by these vehicles, for revenues from this source totalled no more than HUF 900 million for instance in 2002. On the other hand, in compliance with the requirements of the European Union, an axle load of 11.5 tons is to be made possible on the main transport roads of Hungary instead of the currently allowed load of 10 tons. Implementation costs of this so-called national road surface reinforcement programme amount to more than HUF 300 billion. Heavy vehicles with an axle load above 10 tons cause enormous damage even to Hungary's existing road network, as has been demonstrated in Section 3.5. of this study. Accordingly, the costs that these vehicles cause to the Hungarian society are a thousand times higher than the value of the charges they pay. Obviously, this practice cannot be pursued any longer.

Thus, the national road surface reinforcement programme should be implemented on account of the heavy trucks (and to a much smaller extent buses) that are categorized at present as overweight vehicles. But roads with an axle load bearing capacity of 11.5 tons are only needed by a few thousandths part of all motorists. Within the entire Hungarian road motor vehicle fleet, trucks and buses account for 12 per cent, and among these 10 per cent are overweight. From the total number of foreign vehicles entering Hungary, trucks and buses represent 13 per cent, and only 2 per cent of these are overweight (according to data obtained from the Hungarian Statistical Yearbook 2001, published by the Central Statistical Office of Hungary, and information supplied by the Technical and Information Services on National Roads /ÁKMI Kht./). It is a serious violation of the principles of social justice and free market competition – which are also included among the most important principles of the European Union – that substantial costs caused by an insignificant minority of all motorists are borne by the overwhelming majority of transport participants, or, indeed, by the entire society.

Owing to the above reasons it is inadmissible that the road surface reinforcement programme to ensure an axle load bearing capacity of 11.5 tons instead of the current 10 tons on national main roads be financed from public funds. These costs must be borne in full by the owners of heavy vehicles with axle loads exceeding 10 tons. The progressively increasing

road charge, of an average rate of 1 HUF per gross ton-kilometre, aiming at offsetting the additional load placed on Hungary's infrastructure, would be imposed on both domestic and foreign carriers with vehicles of axle loads over 10 tons. Based on favourable experience gathered after the introduction of the charge, its rate can be gradually increased.

3.7. Stricter rules for accounting expenses of motorcar use

In Hungary the fuel expense accounting system currently in use for motorcars encourages motorists not to pay taxes and use their cars as much as possible, increasing thereby environment pollution as well. To increase tax revenues, make transport more efficient and protect our environment, we propose that **it should only be allowed to account motorcar use as expense if the fuel use pertaining to the accounted travel distance is attested by an invoice on the purchase of fuel**. The invoice should also indicate the registration number of the motorcar concerned. In addition to that, it should also be made compulsory to keep a separate verifiable journal on fuel purchase.

Another option worth considering is that motorcar use should be made a non-expense item. The following reasons support such a measure:

Motorcar use for private and business purposes cannot be separated in a well-controllable manner.

Severe environmental and health damage caused by the use of motor vehicles should also be alleviated through such measures.

An ever-increasing portion of motorcars are purchased by companies, which often means concealed remuneration by evading payment of taxes and social security contributions charged on wages. (What is more, companies can even reclaim VAT when purchasing motorcars!)

Some say that only a specified portion of fuel costs could be accounted as expenses, e.g. a fuel consumption of 7 litres per kilometre, or, for instance, not more than 80 per cent of the total costs of fuels. We do not agree with those proposals because motorists would find the easy way out and mark more kilometres on paper than actually covered.

3.8. Increased taxes on company cars

"Company cars are granted for managers and owners of businesses as a fringe benefit. Surveys have shown that some 75 to 95 per cent of executives in fact obtain such benefits. The actual value of that «remuneration» may vary between HUF 100,000 and 1 million per year, depending on the car's value and the extent of personal use. State budget revenues lost on account of the company car allotment (corporate tax and withholding tax or personal income tax) are generally offset by payment of the company car tax. However, the larger the income involved, the less tax is paid proportionally as compensation, given the tax rates stipulated in the currently effective Act on Personal Income Tax." – says the justification provided for the amendment of company car tax regulations in 1999. We agree with the justification, as well as with the fact that as of 1st January 1999 taxes on company cars were increased at a several times higher rate than that of the inflation. Unfortunately, however, further tax increases have not been effected either in 2000, 2001 or 2002.

But even with the current higher tax rates, it has remained worthwhile for businesses to grant company cars to their executives, particularly if cars of higher value are involved. For example, in the case of the highest tax bracket (HUF 21,000 per month), HUF 252,000 was to be paid as company car tax in 2000. Together with the applicable 25 per cent healthcare contribution, the annual payable amount totalled HUF 252,000 + HUF 63,000 = HUF 315,000. For incomes above the limit of HUF 1 million, referred to in the justification provided for the amendment, and calculated with a tax rate of 40 per cent, we will find that tax worth HUF

85,000 per year is not collected by the state (HUF 400,000 – HUF 315,000). However, after taking into account other payable public charges as well (such as the social security contribution, etc.), the aggregate amount of unpaid taxes and contributions may exceed HUF 500,000 per year.

Under current regulations, the tax on company cars decreases if the value of the granted car increases, i.e. the tax has a degressive rate.

Another reason why we do not think that the currently effective regulation is appropriate is because it sets a lower tax rate starting from the fifth year following the purchase of the car. Older cars usually release much more pollutants into the environment and pose much greater risk of accidents than new cars do.

Article 70 of the Act on Personal Income Tax in force provides as follows:

"(3) On account of the income mentioned in paragraph (1), the tax (hereinafter: company car tax) has the following monthly payable rate: [*Table 3.8.a.*]"

Table 3.8.a: Company car tax rates in force

Purchase price of the motorcar (HUF)	Monthly tax (HUF)	
	in the year the car was purchased and in years 1 to 4 thereafter	in year 5 or later after the purchase year of the car
1–500 000	3 000	1 500
500 001–1 000 000	4 000	2 000
1 000 001–2 000 000	6 000	3 000
2 000 001–3 000 000	10 000	5 000
3 000 001–4 000 000	13 000	6 500
4 000 001–5 000 000	16 000	8 000
above 5 000 000	21 000	10 500

Source: Act on Personal Income Tax

For the reasons detailed above we recommend that company car taxes should be modified in a manner that they be calculated with the base rates specified in *Table 3.8.b.*

Table 3.8.b: Proposed company car tax base rates

Purchase price of the motorcar (HUF)		Rate of the tax (HUF)	
Lower limit	Upper limit	Tax minimum	Percentage multiplier related to the HUF 6,000 base value for each HUF 100,000 purchase price increment (%)
1	1 000 000	6000	0
1 000 001	2 000 000	6000	7
2 000 001	3 000 000	10200	8
3 000 001	4 000 000	18360	9
4 000 001	5 000 000	23760	10
5 000 000	–	29760	13
The tax is to be calculated by the following method: (Value at purchase time – Lower limit) rounded off to hundred thousand / 100 000 = Multiplier Multiplier × Percentage multiplier × 6000 + Tax minimum = Calculated tax			

Source: Own calculations

Using such tax rates, the monthly company car tax payable for a Suzuki car with a cubic capacity of 1.3 litres and a value of HUF 1.5 million would be HUF 8,100 + HUF 360 = HUF 8,460 (currently it is HUF 6,000), while the tax payable for a 3-litre luxury car worth HUF 40

million would amount to HUF 302,760 + HUF 4,200 = HUF 306,960 per month (currently it is HUF 21,000).

This example clearly illustrates that our proposal not only takes into consideration the impact on, and the damage caused to, the environment in the taxation, but also imposes these tax burdens in a much more proportionate manner upon the fringe benefit described in the introductory part of this chapter.

A further possibility is that the allotment of company cars can only be accounted as expenses up to a value limit of HUF 5 million and a cubic capacity limit of 2000 cm³, i.e. up to HUF 13,500 per month, and that the company concerned may only grant the remaining part of this benefit from its after-tax earnings. In *Table 3.8.c.* we have made our proposal regarding these rates. We are well aware that such measures would also place additional burdens on the use of cars for non-private purposes, but the severe environmental and other damage caused by cars justifies such stringent approach. To some extent, these measures would even serve the actual company use by easing traffic congestion on the roads, which would result in shorter access times to travel destinations and reduced numbers of environmental pollution-related diseases. The latter one is particularly important for those travelling by car, since the concentration of air-pollutants inside the passenger compartment of cars is several times higher than the one measured either in public transport vehicles or on the sidewalks.

Table 3.8.c: Correction of the proposed company car tax rates according to cubic capacity

Cubic capacity limit (cm^3)		Tax correction impact of the increase of cubic capacity	
Lower limit	Upper limit	Tax minimum	Percentage multiplier related to the HUF 6,000 base value for each 100 cm^3 cubic capacity increment within the limits (%)
1001	2000	0	2
above 2000		1200	5
The tax is to be calculated by the following method: (Actual cubic capacity – Lower limit) rounded off to hundreds / 100 = Multiplier Multiplier × Percentage multiplier × 6000 + Tax minimum = Calculated tax			

Source: Own calculations

In Hungary, enterprises applying the so-called simplified venture tax, introduced in 2003, are not subject to payment of company car tax. As compared to the earlier situation, this is tantamount to granting substantial additional support to a seriously environment-polluting activity. The Hungarian Court of Constitution, however, has already confirmed in several resolutions that “the right of citizens to a healthy environment also includes the responsibility of the Republic of Hungary that the state shall not reduce the standard of environment protection, secured by statutory provisions, except if that is inevitable for the enforcement of other fundamental rights or constitutional values. Even in that case the extent of reducing the protection standard shall not be disproportionate to the objective to be achieved.” The Treaty of the European Union lays down the “polluter pays” principle. This is another reason why the Hungarian regulation introduced in 2003 is contrary to the rules of law of the European Union.

At present, the tax payable on company cars primarily depends on the purchase price of the vehicle concerned. By ruling so, legislators intended to comply with the principle of proportionate sharing of public charges laid down in the Constitution of the Republic of Hungary. The partial abolition of company car taxes represents a serious violation of the pertinent Article in the Constitution. At the same time this is also contrary to the requirement of fair market

competition, which constitutes a pivotal part of both the Hungarian and the EU legal corpus. This measure favours above all the owners of vehicles of higher value. Such cars are purchased through imports, just like the fuels which they consume in quantities far above the average consumption. On the other hand, these vehicles are mostly run to satisfy luxury consumption needs and not to contribute to value creation. Therefore, the planned tax allowance acts against the interests of the Hungarian national economy.

3.9. Increase and effective collection of consumption tax (registration fee) on used motorcars

Clean Air Action Group welcomed and fully approved the Hungarian Government's decision to forbid as of 1st January 2003 the imports of used motorcars into the country if they are more than 7 years old.

Share of used motorcars within total imports had been low for many years and in absolute terms their imports had dropped until 2000. Thus their proportion (measured in pieces of motorcars, including private imports) diminished from 36 per cent in 1996 to 11.7 per cent in 1999. 2001 brought a turn-about in imports of used motorcars, for their number surged from 13 thousand in 2000 to 36 thousand in 2001, then to 96 thousand (!) in 2002. This rapid increase was triggered by the liberalization of used motorcar imports and by the abolition of customs duties on motorcars originating from the European Union.

Back in 1996, an age limit of 4 years had been set for imports of used motorcars. In 2000, however, this restriction was revoked, which resulted in a situation where Hungary started gradually turning into the scrap-yard of Western Europe. Motorcar-owners in Western Europe were glad to get rid of their used vehicles (and the troubles and costs involved) even for a few hundred Euros. This process, however, contributed to deteriorating the environment pollution and impairing the traffic safety in Hungary.

Imports of used motorcars are largely facilitated by customs procedures currently in force, which allow evasion of customs duties and taxes in mass proportions. And those concerned are in fact taking advantage of this possibility in many cases: they do not pay the consumption tax (and the connected VAT) according to the internationally accepted price catalogue, but on the basis of the presented bill, which is underinvoiced in most cases. To make things even worse, the real value of motorcars brought into Hungary as a private import is only checked if the value of the presented invoice is less than 50 per cent of the catalogue price (instead of the former 80 per cent). Such loosening in regulation has lead to a practice when the invoiced value of motorcars imported in the above manner amounts to 51 per cent of the catalogue price as a rule...

That is the reason why Clean Air Action Group is urging that **the customs value, and from the date of Hungary's accession to the EU, the registration fee, of used motorcars should be determined on the basis of the catalogue price.**

Furthermore, in order to cut back the imports of used motorcars we propose that **in case cars older than 3 years are put into use in Hungary, progressively increasing consumption taxes (or registration fees) should be levied at a rate which ensures that vehicles older than 4 years are not worth putting into use any more.**

We recommend that **the rate of the registration fee imposed on used motor vehicles should be at least 100 per cent on average**.

A further important reason to support such steps is that from 2005 on, car manufacturers in the EU are obliged to take back for recycling the new motorcars they sell. This obligation, however, does not cover motorcars manufactured prior to 2005. As a consequence, Hungary itself has to raise the funds needed to cover the costs of handling those vehicles.

3.10. Substantial reduction of subsidies to construct further high-speed roads

Available financial resources should be spent on maintaining and renovating the existing road network, on constructing short road sections to avoid towns and villages and on restoring the railway network, because these are much more economical and environment-friendly investments than the development of Hungary's high-speed road network. The only exception should be the eastern section of the M0 motorway (Budapest ring-road), which should only be built along the trace of the connection at Gödöllő. Detailed justification for our proposal can be found in Appendix 7 to this study, therefore we will only expound here our views on the northern section of the M0.

Among the items of the state budget, funds should in no way be estimated for the northern section of the **M0 motorway** (between national roads No. 2 and 11), because this giant investment, the total costs of which would exceed HUF 60 billion, is equally unjustified from the aspect of the national economy, transport and environmental protection.

The northern motorway section would cause serious pollution to the neighbouring area. Air pollution, noise, traffic congestion and the degradation of green surfaces would imperil the health of the affected population, and would also destroy several resort areas around Budapest, which have already been dangerously reduced in numbers.

The motorway would pass over the most important water reserve of the Hungarian capital. It is inadmissible to consider any investment which might jeopardize the main water base of a drinking water supply system serving the need of 3 million people.

The new road section will generate huge additional traffic, as has been clearly demonstrated by the southern section of the M0 as well.

Even if by some miracle the extra traffic was not generated, this section of the motorway would only improve Budapest's traffic situation by less than a single per cent. If we devote HUF 60 billion to achieve such improvement and if, in general, we wish to solve the traffic problem of the Hungarian capital by a similar method, then more than HUF 6000 billion should be spent in order to achieve the "comprehensive solution"! However, enhanced public transport services, extended parking regulation, generally used traffic calming measures, etc. are by several orders of magnitude more efficient ways of attaining the same goal.

Judging by the most optimistic forecasts (against which serious doubts can be raised), the northern motorway section, in the event of being implemented, would only better the travel (driving) conditions of some 20 to 30 thousand people. However, if the funds devoted for the above investment (which equal the total annual budget of the Budapest Public Transport Company) were used to raise the standard of public transport services in the capital, travel conditions of 1.5 million people could be perceptibly improved.

Several local governments concerned have rejected the planned investment in official resolutions, and preliminary surveys show that the project is also opposed by the majority of the affected population.

3.11. Introduction of urban road charges

We recommend that urban road charges should be introduced in Budapest and – if appropriate assessments prove that it is reasonable and justified – also in various other settlements of Hungary. This is a local government responsibility, but the state has to promote it through awareness raising, professional backing and by creating a suitable legal environment for this task.

Putting into practice our proposal would also improve the financial standing of the local governments concerned, which in turn would reduce the need for state resources. In addition,

this measure would significantly better the environmental and traffic situation in Hungarian towns, and would enhance their potential to attract businesses.

According to data of the traffic count carried out in 2000, on working days 255 thousand motorcars and trucks cross the boundary of Budapest. Assuming that each time they enter the capital area, vehicles have to pay a road charge of HUF 1000 on average, and that this measure cuts down the number of entries to 160 thousand, annual revenues (calculating with 250 working days a year) would total **HUF 40 billion**. (In the first year these revenues would be smaller by a few billion HUF due to the costs of building up the system; but subsequently it could be operated at relatively low costs. What is more, the electronic system set up for this purpose could also be used in part for the benefit of public transport.) The generated extra revenues should be devoted to improving public transport services.

Over and above the mentioned HUF 40 billion, additional benefits worth tens of billion HUF are brought about by reduced environment pollution and damage to human health, by less traffic and fewer congestions on the roads and by Budapest's regained attractiveness. (Issue No. 2003/6 of the monthly "Lélegzet" published by Clean Air Action Group contains detailed studies on urban road charges.)

3.12. Compulsory introduction of parking fees

Hungary's most valuable asset – right after the people living here – is its land. And even within that asset, inner urban areas represent an outstandingly precious property. At present, this property is mostly used free of charge for the purpose of storing motor vehicles. This practice entails an extremely irrational area management and wasteful use of urban areas, which has led to a scarce economy in this sector. (An unfavourable by-effect is that it encourages purchasing ever more motorcars even in densely populated areas.)

For that reason we recommend that market economy should be introduced in this sector, too: demand and supply should find their equilibrium through adequate prices. The state should enact regulations making it mandatory for local governments to gradually introduce "equilibrium parking fees" in their areas. This means that parking fees should be set at such rates that even in peak hours at least 10 per cent unoccupied legal parking lots be available, and illegal parking be eliminated altogether.

International experience shows that similar measures have been successfully put into practice in many parts of the world. For instance, in several large cities of Japan and South-Korea, motorcars will only obtain registration numbers if their owners can prove that they are capable of storing these vehicles outside the town's public areas.

Another major problem with today's practice in Hungary is that the communities concerned hardly have a share at all in the revenues collected from parking fees. This should definitely be changed.

3.13. Increased taxes and duties on air transport

Air transport is granted huge hidden and open subsidies all over the world. Such subsidies may take diverse forms:

- Kerosene, the fuel of aeroplanes, is not subject to consumption taxes (excise duties).
- In international passenger traffic, VAT is not payable on air tickets.
- Air transport companies are often granted customs allowances for their acquisitions. (For instance, the Hungarian state has released payment of customs duties worth several billion HUF in recent years on the purchase of aeroplanes by the Hungarian Airlines /MALÉV/.)

- In the airports of most of the countries of the world duty-free (tax-free) shops are operated. The European Union has already banned such shops, because it considered that their operation seriously violated the principle of fair market competition.
- Airline companies and airports receive massive direct state subsidies (investment subsidies, etc.) all over the world. The influence of air transport companies is clearly exemplified by the fact that following the terrorist attack of 11th September 2001, the American Government granted non-refundable subsidies in the value of USD 15 billion to American airlines. (New York City, the hardest hit victim of the terrorist attack, only received a fragment of this sum as state support!) Under the same pretext, the United Kingdom, France and Germany also gave substantial subsidies to their respective airlines. Although certain circles of the European Commission and of the European Parliament expressed their doubts about the compatibility of these measures with free market competition, the power of the airline companies got the upper hand. And apart from a temporary setback, air traffic has been growing steadily ever since...
- In many countries of the world – including the EU member states – airlines do not have to pay VAT when purchasing aeroplanes. In any other transport sector the purchase of vehicles is subject to VAT payment.
- Construction and maintenance of roads and railway lines leading to airports are predominantly financed from public funds. (In Germany, for example, between 1993 and 1998 the state spent DEM 3 billion on building up new roads and railway lines to connect airports and the towns situated nearest to them.)
- All over the world uncounted billions have been spent (and are even today being spent) on the development of air transport from the budget of defence expenditures. Civil aviation has a considerable share in the benefits of such developments, but those concerned coyly leave this fact unmentioned.
- Border-guards and customs authorities stationed at airports are financed from public funds.
- Those operating private aeroplanes are allowed to account most of their incurred costs as expenses, i.e. their private flights are financed from money which is not subject to payment of personal income tax and social security contribution. This is an illegal but common practice, and authorities do nothing to put an end to it. What it really means is that a seriously environment-destroying leisure activity of an extremely small group of well-to-do people is supported from public money.
- And last but not least, perhaps the largest among all types of support granted to air transport is that it does not pay for the environmental, health and other damage it causes.

Subsidies granted to air transport are generally justified by its alleged favourable impacts on economic development in the region concerned. This statement is questionable even in itself, considering the astronomical sums spent on subsidizing this branch of the transport sector. It is hard to believe that granting similar subventions to other branches of the economy would not bring about equal or even better economic results in the affected regions. Nevertheless, several studies have been prepared on the subject with a view to clearing all doubts. These surveys have revealed that factors other than the availability of an airport in the area have much more influence on the development of a particular region. Numerous assessments arrived at the same conclusion; among them a survey carried out in England in which senior managers of large corporations were asked about the criteria they use when deciding about the location of their companies (Sharing Economic Prosperity – A Strategic Approach to Aviation. Policy Paper 5. APC, Surrey, UK, 1997). On behalf of Clean Air Action Group, the Hungarian Centre for Environmental Economics prepared an evaluation on the economic impacts of developing the Pécs-Pogány Airport. This study, too, has demonstrated the diseconomy, in the broader sense of the term, of such an investment.

We welcomed that in 1997 the Hungarian Government and the Parliament approved our proposal to cancel direct state subsidies granted to the Hungarian Air Traffic and Airport Di-

rectorate. By virtue of that decision, as from 1998 the Hungarian state budget has not provided any direct financial assistance to the Directorate. Unfortunately, air transport continues to receive huge state support in various other forms. Air travel is the most polluting means of transport, but environmental costs are not reflected at all in its prices. Air transport is being granted substantial allowances in Hungary and indeed in all other countries of the world: e.g. fuel for aeroplanes is not subject to consumption tax (excise duty). If the same rates of excise duty and connected VAT were payable on aircraft fuel than on other types of fuel, then payments by the Hungarian air transport sector would have totalled HUF 12 billion in 2000. This amount is in fact also an indirect subvention, granted by the Hungarian state to air transport. Hungarian inland air traffic is negligible, and the macro-economic issues of international air transport should be settled jointly with the European Union; therefore relevant changes should be implemented at a later date. When settling the economic standing of the Hungarian Airlines (MALÉV), this subsidy should be treated as a weighty factor.

In the past, MALÉV could purchase its fleet of aeroplanes free of customs duties and value-added tax.

Consequently, air transport receives massive covert subvention, which is unreasonable for economic and extremely unfair for social reasons. Imposing increased taxes on air transport is also justified by the fact that in recent years, Hungary saw a dramatic rise in the number of aeroplanes crossing its air space, which also entails substantial additional environment pollution. (Ferihegy Airport received 20 thousand aeroplanes in 1990, and more than 40 thousand in 2000.) It is to be noted that green movements all over the world are demanding that heavy taxes be imposed on air transport. Several scientific research institutes have already elaborated detailed proposals for the implementation.

3.13.1 Increased air tolls

Higher air tolls are one of the means of compelling airline companies to pay for at least a part of the external costs of air transport. Air tolls in Hungary are extremely low compared to other countries (*see Table 3.13.1*.). In our opinion this is unacceptable, therefore air tolls should be raised to the level of the Austrian or German rate. Considering, however, that these air tolls are regulated by the so-called EUROCONTROL International Convention, to which Hungary is also a signatory, increasing the tolls requires time and effort. Consequently, all we can recommend at present is that the Hungarian Government should look into possible ways to somehow raise the tolls after all in conformity with the convention. If this international convention does not allow any increase in the near future, the Government should find other means to expand state revenues from air transport in conformity with EU regulations.

One of the main reasons to justify a substantial increase of air tolls can be the fact that the wages of Hungarian air traffic controllers are much lower than the wages of their counterparts in the EU, and that it is advisable to eliminate this difference on account of the EU accession.

Table 3.13.1.: Air tolls in European countries

Country	Toll* (ECU)
Belgium/Luxembourg	78.09
Germany	66.44
France	61.42
United Kingdom	80.69
Netherlands	45.38
Ireland	20.53
Switzerland	72.03
Portugal	39.31
Portugal (Santa Maria)	14.56
Austria	53.75
Spain (Europe)	47.50
Spain (Canaries)	45.62
Greece	24.04
Turkey	41.15
Malta	34.47
Italy	64.13
Cyprus	25.38
Hungary	21.80
Norway	46.46
Denmark	51.76
Slovenia	64.78
Romania	36.98
Czech Republic	46.87
Sweden	46.51
Slovak Republic	65.77
Croatia	46.11
Bulgaria	60.32

*for units approved by the European Commission
Source: Hungarian Ministry of Transport, Telecommunications and Water Management, 1998

3.13.2. Introduction of airport utilization fees

Air space use should be treated as the utilization of a natural resource (e.g. noise pollution penalties, air load fees). It is necessary to consider the possibility of introducing such fees in air transport. There are airports in some countries that charge, for instance, noise pollution fees on aeroplanes exceeding a certain noise level. In Hungary airport utilization (environmental load) fees should be introduced. Environmental and health damage caused by air transport are even more severe in and around airports because the emission of harmful substances by aeroplanes and the noise load are particularly high at the time of landings and take-offs. The amounts collected from such fees would also add to the revenues of the Hungarian state budget.

3.13.3. Abolition of duty-free shops

Duty-free (tax-free) shops at airports violate the rules of fair market competition by favouring air transport and – among others – the sales of tobacco products and alcoholic beverages. Operating such shops also provides a supply system for smuggling. That is why the European Union adopted regulations to ban duty-free shops in 1999. Hungary should follow this example as soon as possible, and the more so since their operation does not bring any benefits for the national economy; what is more, duty-free shops have distinctly adverse impacts, being unfair competitors to tax-paying enterprises.

Existence of duty-free shops is particularly questionable today, when customs regulations have been made stricter, practically not allowing Hungarian citizens to bring into the country any cigarettes and hard liquors, for example. This measure should not be delayed until the date of Hungary's accession to the EU.

3.13.4. Abandoning direct subsidization by the state and by local governments

Since air transport is the relatively most polluting means of transport, it should not receive any kind of support from the state or from local governments. Thus, all concepts and schemes should be rejected which aim at modernizing and renovating Hungarian airports by using state funds (or credits borrowed with state guarantees).

In the first quarter of 2003, the Hungarian Parliament debated the Bill on the National Territorial Planning Scheme. We think that it is unacceptable that a large number of regional and international airports are marked in the Annex to the Planning Scheme, without completed economic and social impact assessments. Even the development of the Airport of Bratislava is rather based on "national state considerations" than on economic grounds, just a year before the EU accession. Today's higher safety and environmental expectations could be met much more economically with one large regional airport (Vienna) and a high-speed railway network (Vienna, Bratislava, Győr, Brno). Hungarians, however, are dreaming about placing further airports in virtually every major town of the country.

According to data disclosed in the press, local governments concerned request from the state budget annual subsidies worth HUF 2–3 billion for provincial airports. Consequently, these expenditures can be saved directly, while indirect savings can be much larger than that.

3.13.5. Landing fee of non-public-service flights

In Hungary, the number and traffic of non-public-service small aircrafts have been dynamically growing in recent times. These vehicles cause considerable environment pollution (noise and air pollution, need to construct new airports and to extend the existing ones), and they increase exponentially the risk of accidents, which is demonstrated by recent catastrophes. At the same time this traffic receives similar preferences to those granted to public-service flights (they do not pay excise duties, consumption tax, weight tax, etc. either on the fuel they use or on the vehicle). This traffic serves predominantly luxury purposes. Such air transport is especially suited for terrorist actions as well. For all these reasons, we think that it is necessary to impose stricter control and higher taxes on non-public-service flights. To this end we propose that such aircrafts should pay at the time of each landing a fee of HUF 100 on every kilometre covered from the take-off, plus a landing fee of HUF 5000. These sums should be paid into the Environmental Protection Fund. Collected fees may not bring more than a few hundred million HUF as extra revenues; however, the goal is not to increase state revenues, but to protect nature and the environment and to safeguard peace and quiet for the population.

4. Energy

Hungary spent around HUF 1,200 billion on energy in 2001. The energy sector's direct and indirect contribution to increasing the country's foreign trade deficit totals nearly USD 3 billion. This amount equals almost 14 per cent of the value of all exports from the Hungarian customs area.

Temporarily rising world-market petroleum prices have a significant impact on Hungary's economy: in 1998 they increased the volume of GDP growth by approximately 1 per cent, while in 2000 they reduced it by 2 per cent. In the years 2000 and 2001, the whole of the world-market price rise entered and influenced the Hungarian economy, and as a result, in 2001 Hungary's foreign exchange expenditures were by over USD 1 billion higher than in 1999. As compared to the year 2000, prices of petroleum and its derivatives slightly fell in 2001, which brought about an improvement worth USD 194.7 million. Owing to the delayed adjustment to natural gas prices, however, Hungary's expenditures rose, with incurred extra costs totalling USD 269 million. The combined effect of these two factors caused Hungary to spend by USD 74.3 million more on hydrocarbon imports.

Roughly calculated, inflation of the USD currency has been counterbalanced by its revaluation against the Hungarian currency since 1990, therefore by expressing domestic energy prices in USD for that period, we will obtain the approximate real value of these prices. Gas fees of large consumers have increased by 22 per cent between 1st January 1990 and 1st January 2000, whereas household fees rose by nearly 70 per cent. Electricity prices went up by almost 21 per cent for large consumers and by around 160 per cent for household consumption.

Because of the delayed process of regulating the administrative prices of line energies, it proved to be economically worthwhile to export energy-intensive products – particularly as a consequence of high world-market prices at the end of 1999 and at the beginning of 2000. This was above all reflected by exports of the highly raw-material-intensive economic sectors. Consequently, it is advisable to regulate the administrative producer prices more rapidly and flexibly, as was for the most part in fact implemented in 2002.

Modernization of Hungary's economic structure is hindered by **the large share of energy-intensive and raw material-intensive products in exports from the Hungarian customs area**. At the same time, labour-intensive products account for a relatively small part of exports from within the Hungarian customs borders. As regards energy prices, large consumers should already pay world-market level prices for the energy today, for they also sell their products at prices that are essentially world-market prices. Energy prices need to be raised for household consumption as well, but this should be accompanied by proper compensation, as required by the reduced wage and income level of the Hungarian population. On the expenditure side, prices should be raised in a manner that instead of allowing producers to realize larger profits, energy taxes (approved by the European Union on 20th March 2003) should make up the bulk of the increase. Larger profits of producers may have the adverse result of swelling the outflow of profits from Hungary, which in turn may have to be offset by higher interests on the state debt, with the ensuing extra budget expenditures. (As to the energy tax, appropriate justification and improved acceptability can be ensured by imposing it as an environmental tax.)

At present, energy users do not pay for the bulk of the harm and costs they cause, because energy prices today fail to represent the true costs involved in the sector. Calculated at exchange rate, Hungarian household energy prices remain significantly under those of the EU countries. However, calculated at purchasing power parity, they roughly correspond to EU prices. Industrial user prices of line energies essentially match the EU price level (international competition prevails in this area, therefore foreign market prices, i.e. those calculated at foreign exchange prices, should be taken into account here). On the other hand, even in the

EU countries, energy prices are considerably lower than the actual costs, owing to the following factors:

Prices do not include the costs of most of the measures which need to be taken in order to meet the ever stricter environmental protection requirements.

Present prices fail to reflect the growing scarcity of energy sources, i.e. the foreseeable trend that they will become ever more expensive to obtain in the future. (Both the European Union and Hungary are being forced to acquire an ever increasing part of their energy need through imports. In all probability, Hungary's imports of crude oil and natural gas may well exceed 90 per cent of the total consumption within ten years from now. This may cause Hungarian energy prices to surge on account of the increasing purchase costs.) Within the energy use of the EU15 group, imports accounted for 47.6 per cent in 1995. Their portion is estimated to reach 56.7 per cent in 2010, and 65.6 per cent in 2020.

Energy prices do not include a substantial part of the costs attributable to the environmental and other damage caused. Incorporating these costs would in some cases multiply the energy prices.

External costs may greatly vary with the type of energy and the technology used for production; therefore the energy taxes (and the environmental load fees – *see Chapter 5*) to be introduced should also differ accordingly.

The rise of energy prices in the wake of imposing or raising energy taxes may be offset by a mechanism which reduces wage costs. Thereby it stimulates energy saving and also creates new job opportunities, which in turn boosts family incomes. Regarding the Hungarian population's overall income position, even a substantial overcompensation can be achieved in this manner. Subsequent parts of the present study discuss this subject in detail.

Keeping energy prices low in comparison to real costs and EU prices is tantamount to defrauding entrepreneurs and the population. It makes them think that these prices are true ones, and can be sustained in the long run, which is obviously a nonsense. Therefore we think that it is indispensable to impose increased taxes on energy sources, both for industrial and household consumers, simultaneously with elaborating and introducing an appropriate compensation scheme.

Although for various reasons energy prices today are not raised to the level corresponding to real costs, **it is essential that in formulating the energy strategy the higher (real) prices should be used for the calculations.** Calculating with incorrect cost data will necessarily lead to fundamentally erroneous conclusions and deeply mistaken decisions.

The reduction of labour costs and the increase of large consumer energy prices would mutually reinforce each other's impact. On the whole, these measures would shift the structure of the Hungarian economy and exports towards modernization, in a manner that in the meantime Hungary's comparative advantage (the available workforce and its improving competitiveness) would be enforced through economic constraint. This would act as a multiplier in Hungary's foreign trade, because net foreign exchange yields from more efficient products involving high-standard labour culture are positive; what is more, they are significantly higher than revenues from energy and material-intensive products, several of which even have a negative net foreign exchange yield.

The increase of energy taxes would generate inflation **only in part and temporarily**. On the one hand, energy costs would fall (or at least would grow slower) as a consequence of enhanced energy efficiency. On the other, increased employment (within a period of 10 years one million new job opportunities are to be established to attain the EU employment level) and improved economic structure would contribute to structurally easing the inflationary impact. This may be anticipated because as a consequence of the multiplier-type effects of growing efficiency and expanding employment, specific social costs would be reduced, which works against inflation. Instead of energy, highly manufactured social goods containing more added value would be used. Also, enhanced employment would contribute to lowering the current rate of unemployment and thereby would reduce the social costs of allowances and

benefits which are ultimately charged on the society. At the same time, each new entrant in the labour market would also trim down the per capita level of other social costs.

A reduction in energy consumption would greatly improve the general state of the environment in Hungary and would help meet the requirements set in international agreements.

Prices of electricity in Hungary are much lower than in member states of the European Union.

It is to be noted that among all items, line energies are the farthest from meeting the requirements of tax harmonization with the EU countries.

On 17th July 1998, the European Parliament approved the so-called Olsson Report, which concluded that it would be beneficial for the EU to introduce new energy taxes. At the same time, a resolution was adopted (with a final vote of 417 in favour, 80 against and 17 abstentions) to introduce the proposed energy taxes as early as possible in the EU member states.

Hungary has also assumed an international obligation to increase energy taxes by signing the Energy Charter Convention. Among other provisions, the Charter says (Article 3 of Appendix 3):

"The Signatories ... shall elaborate proper legal and regulatory frameworks to promote (among other issues) the following:

a) efficient operation of market mechanisms, including market-oriented pricing and comprehensive reflection of environmental costs and benefits ..."

The Kyoto Protocol on Climate Change also requires all nations to work out and implement measures such as "*progressive reduction and elimination of market deficiencies, financial incentives, tax and customs exemptions, as well as subsidies in all economic sectors that generate greenhouse gases*".

Environmental-type taxes should be raised instead of contributing to boosting profits that may be repatriated from the country – at the expense of Hungary's environment. Opting for the tax raise is, obviously, not only a duty imposed on Hungary by international obligations, but a policy demanded by its very own national interests. Citizens should be made aware of it, so that the Hungarian Government, supported by public opinion and by civil groups, may have a stronger position when negotiating with the affected producer interest groups, which have excessive power today.

Higher energy taxes along with other measures (that are discussed in later chapters of this study) contribute to enhanced energy efficiency and the widespread use of environmentally less harmful energy production methods (renewable resources of energy, cogeneration of energy, district heat services).

4.1. Harmonization of taxes on electricity, natural gas and coal

It cannot be explained by any rational economic reasons why natural gas, electricity and coal – all seriously harmful to the environment and chiefly using imported raw materials – are levied with the lower available VAT rate (12 per cent) in Hungary. (We are aware that among fossil energy sources, natural gas is the least environment-polluting option to use. Nevertheless, this does not mean that it is an environmentally friendly option, for using it in ever-increasing quantities substantially contributes, among others, to the greenhouse effect. Furthermore, natural gas is also a non-renewable energy source, which is another motivation for making increased efforts to save as much of it as possible.) In principle, the VAT rate applicable for natural gas, electricity and coal should be 25 per cent, similarly to other industrial products and fuels. However, latest research findings have demonstrated that this is not the most efficient possible method for the taxation of energy sources. (We would like to mention already at this point that simultaneously with the tax raise, we propose a rearrangement of

tariffs to provide compensation for small household consumers without reducing the revenues of energy suppliers.)

Here is what the OECD stated in its country review about Hungary for the year 2000 (*OECD Economic Surveys, Hungary, Country Reviews, November 2000*) regarding Hungarian intentions to provide social welfare support through applying lower VAT rates for certain products:

"Authorities argue that they are focussing on «socially sensitive» products, and so the wide-spread use of the lower VAT rate contributes to achieving socially desirable redistribution. However, taking into account the huge sums passing through the value-added tax system, as well as the serious price distorting impact they cause, it is unclear whether VAT is in fact an efficient means for income redistribution. As a matter of fact, in most countries where different VAT rates are in use, it may happen that applying the lower VAT rate actually means granting more support for the well-to-do that for the poor. In Hungary this support means value-added taxes reduced by 9.7 percentage points on average for the lowest decile of the society, which is not significantly different from the 8.7 percentage points which are granted to the highest decile through this scheme. What is even more important than that, however, is that the richest 10 per cent of the population receives 16 per cent of the total support value, while the poorest 10 per cent only have a share of 5 per cent."

Consequently, the OECD stated the very same views as the ones asserted by Clean Air Action Group insistently and emphatically for many years: granting support through value-added taxes is pointless.

District heat supply, cogeneration of energy and renewable energies would be exempted from payment of the tax. District heat supply is particularly advantageous in densely populated areas that are badly affected by air pollution.

4.2. Extension of the energy efficiency programme

In sections previous of the present study we have already provided justification for the need to support energy efficiency enhancement. Here we are going to set forth some further arguments in favour of such measures. Today already a more robust energy efficiency programme should be implemented, and the more so as higher energy prices have considerably shortened the payback period of such investments. Energy efficiency programmes would have exceptionally favourable impacts also because energy (mostly imported into Hungary) may be replaced by (predominantly domestic) live labour. In this context we make reference to a model elaborated by Austrian and Slovak researchers, which demonstrates that by settling energy prices, applying appropriate energy taxes and launching a state-supported energy efficiency programme Slovakia could open up 350 thousand new job opportunities (The Transformation of Slovakia).

If the value-added tax is refunded immediately, energy rationalization investment projects become much cheaper. Already in the year of implementation, this will cause inflation to diminish at a greater rate than it is made to grow by rising energy prices. On the other hand, the inflation rate is also cut back (and in a lasting manner to cap it all) by lower energy costs brought about by the investment. Less environment pollution is an additional cost-reducing factor.

This programme would help develop the Hungarian environment protection industry, as well as enhance its competitive and export capabilities. Employment in Hungary would also greatly benefit from the impact of such programmes.

The proposed energy rationalization programme would fit in very well with the housing programme and the renovation of flats in Hungary. What is more, it would multiply the favourable impacts and promote a more comprehensive implementation as a result.

We do not propose that energy efficiency fees should be imposed on renewable energy sources and on cogeneration of energy.

4.3. Raising to 25 per cent the VAT rate applicable to artificial fertilizers

Producing artificial fertilizers is an extremely energy-intensive process.

More rational energy utilization can also be encouraged by not giving preferences to products manufactured by using particularly high quantities of energy. It is a wrong policy to stimulate the use of artificial fertilizers that place a serious load on the environment in Hungary. Application of increasing quantities of nitrogen fertilizers can serve as a warning sign: from 263 thousand tons in 1999 it went up to 275 thousand tons in 2001, while the amount of manure used diminished from 3920 thousand tons to 2869 thousand tons in the same period.

We think that applying the lower (12 per cent) VAT rate to artificial fertilizers, insecticides and herbicides is tantamount to **granting unjustified preferences; what is more, the current practice is definitely harmful from the aspect of environment protection and energy management**.

One of Hungary's most important interests is to **carry out agricultural production in a sustainable and environmentally friendly manner in the long run**. A crucial **precondition** for such agriculture is **to cut back on the use of materials and products which cause harm to the soil, plants and animals, as well as to human health**. In Hungary the use of chemicals radically dropped during the transition period, in the early 1990s. Unfortunately, recent years have seen a change in this trend and a slight increase again. Further expansion of chemical use could be partly prevented if the rate of the VAT applicable to these products was increased to 25 per cent. The VAT rate reclassification would hardly affect large-scale farming since they can reclaim VAT regardless of its rate; but the increase would promote a change in the farming methods of small-holders who find it difficult to comply with the professional requirements of up-to-date chemical use anyway, but are best suited to implement more environment-conscious cultivation forms.

The mentioned VAT rate reclassification is also justified because in the European Union the concept of using fewer chemicals in agriculture has been gradually gaining ground recently. Land used for growing organic ("bio") products in Austria increased tenfold during the past five years. In Denmark, Finland and Sweden, a special ecological tax is imposed on the use of pesticides. Already today, the only Hungarian agricultural products that are allowed to enter EU member states without any restriction are those that are grown without the use of chemicals.

The majority of chemicals used in agriculture, as well as the raw materials for producing those chemicals in Hungary come from imports. Their reduced use could improve Hungary's foreign trade balance and enhance the competitiveness of domestic labour force.

At the same time we propose that **extra revenues resulting from the increased VAT rate applicable to artificial fertilizers and pesticides be entirely allotted to supporting organic farming in Hungary.** This can be financially implemented by taking into account in the subsidization system, and deducting the amount of, the VAT reclaimed when using artificial fertilizers. The funds so generated should be added to the financial assistance granted to organic products. Our calculations have revealed that the VAT rate reclassification of artificial fertilizers and pesticides from 12 to 25 per cent represents an aggregate extra burden of some HUF 20 billion. However, considering the regressive impact of the tax, **additional revenues worth HUF 15 billion can realistically be anticipated;** and these should be entirely devoted to supporting organic farming.

These measures would contribute to reducing the rate of rural unemployment, too, for it is well known that organic farming requires much more live labour than ordinary agricultural production which uses chemicals.

All the above is also substantiated by studies and assessments under the title "Environmental Protection and Integration" carried out recently by the Hungarian Academy of Sciences in its Strategy Research Programme.

5. Environmental load fees, environmental product charges and mining taxes

Various types of environmental taxes and charges have become ever more widely used all over Europe – both in the EU and in the former Eastern Bloc countries. Experience gathered up until now indicates that the use of such instruments is beneficial both from an economic and an environmental protection aspect. We recommend that environmental load fees (ELF) should be introduced as soon as possible as a means to distribute revenues in a more fair and reasonable manner. **The current** unfortunate **practice of permitting activities that damage the environment enables some companies to increase their profits** at the expense of their competitors – which is unjustified and contrary to the principle of competition under equal terms. The introduction of ELFs attempts to change that practice, and make sure that environmentally harmful activities are not preferred to those using more labour and containing more added intellectual value; therefore, Hungary's economy could move ahead at a faster rate.

Both scientific research and practical experience have demonstrated that the later it is done, the more it costs to remove the damage caused by environment pollution. So, the prices of environmental elements (air, water and soil) need to be involved in economic planning by applying the "polluter pays" principle. Environmental load fees are efficient means of controlling economic processes through encouraging the user of environmental elements to reduce and prevent pollution, and providing them with financial assistance to achieve this goal from the generated revenues. If ELFs perform well, the society may benefit from an improved state of the environment and human health. Competitiveness of the Hungarian economy would also be enhanced once technology is transformed and developed to become more environmentally friendly, which is indispensable for further progress anyhow.

The system of ELFs is designed to serve sustainable development through a quality-oriented improvement of economic activities.

If they are introduced comprehensively, the impact of ELFs on the annual inflation rate – calculating with direct effects only – is not expected to exceed 0.3 per cent with the lower fee rates proposed by the Ministry of Environment Protection, and 0.5 per cent with the higher rates. ELFs are planned to be introduced gradually, which means that in the first year this value will only be 0.01 per cent and 0.15 per cent respectively. However, considering indirect impacts as well, on the whole the introduction of ELFs may not increase the rate of inflation at all. Rather the opposite is true because by reducing environmental harm and health problems, and by providing support for restructuring the economy, they reduce costs at the level of the society as a whole, that is, they have an anti-inflationary effect.

We think that the professional work carried out in the Ministry of Environment Protection to elaborate ELF schemes meets general expectations and complies with the requirements of Act LIII of 1995 on the General Rules of Environmental Protection, even though this preparatory work is not yet completed and additional investigations are also needed. This subject is only discussed in brief in this document, starting from the situation in 1999. At that time it was assumed that environmental load fees would be introduced in 1999, and we have kept the calculations prepared in that year, and will present them below. These figures, of course, should be adjusted according to the actual date of the introduction.

We recommend that ELFs should be introduced in a manner that the revenues generated by them are principally used for local improvements.

Since funds for environmental purposes are extremely scarce in Hungary, it is advisable to give preference to similar structural solutions (i.e. means that reduce pollution through their indirect economic stimulation impact). These should be presented to the European Union as own resources, i.e. as Hungary's pecuniary contribution to the protection of the environment, and they should form the basis for requesting financial support from the EU. This solution is in compliance with the principles of market economy as well.

It is to be noted that even the higher rates proposed by the Ministry are incapable of covering the costs of damage that environmentally harmful activities cause. Therefore, it is essential that ELFs are introduced as soon as possible, with the higher fee rates. On the other hand, it is to be assessed whether this is in fact an efficient economic instrument under current circumstances to cut back environment pollution. Environmental load fees would entail considerable extra administrative work (and expenses), whereas they would generate much less revenues than several other tax types. As we have already pointed out, it would be possible to substantially raise state budget revenues by raising the applicable rate of certain existing tax types, practically at no extra administrative costs.

5.1. Introduction of air load fee

Air quality in Hungary has improved in the last decade; however, in absolute terms in many places it is often still worse than the approved health limit values. On the whole, "polluted" areas are decreasing in size but the combined total area that is "polluted" or "slightly polluted" is steadily expanding. The latter two categories comprise over the half of Hungary's population.

The payable rate of air load fee (ALF) would be calculated by the quantity and the level of hazard of polluting substances emitted into the air annually.

The Ministry of Environment Protection has published a study titled *Impact Assessment of the Concept of Environmental Load Fees*, presenting their estimates. Supposing the higher fee rates are introduced and the air load fee will not change in real terms, the emission of sulphur-dioxide and nitrogen oxides are expected to drop by 72 and 2.1 thousand tons respectively. The consequent environmental benefit will be higher than the costs of reducing pollution. Furthermore, payers of ALF will be offered a portion of the fee to finance their capital investments needed for reducing the emission, which constitutes an additional stimulation. It is also expected that new penalties and limit value regulations will be introduced and the system of financial assistance will be modified, which – along with the above-mentioned factors – may reinforce the efforts. Even if the lower rates are imposed, environmental pollution levels may fall as a result. Significant improvement, however, can only be expected after the first five years of the gradual implementation of ALF at the highest achievable rate. Most of the revenues from ALF would come from the electricity sector, but also mining, the production of non-metallic goods, as well as metallurgy and metal processing could take a significant share.

5.2. Introduction of water load fee

Although water quality has also improved in recent years, it is not entirely satisfactory for various uses and life in and around natural waters of Hungary. It is vital to prevent pollution and contamination of surface waters to protect human health and to preserve or even enhance the ecological value of waters. Hungary is required by international obligations and by the EU membership to take measures – among others to establish economic incentives – aiming at achieving those goals. The entire impact of the water load fee (WLF) can only be evaluated as

part the system of all relevant regulations; consequently, it should be defined and calculated in line with other regulatory elements.

The payable rate of WLF is calculated by the total quantity of polluting substances discharged into waters annually. The rate may vary with the hazard that the individual pollutant represents and with the specific features of the affected area.

It is estimated that direct discharge of polluting substances into waters will go down by 3.14 per cent if the lower rates are introduced. Some bigger towns in the country may already be encouraged by this rate of payable fee to implement some capital investments with a view to improving water quality. If the higher rates are introduced, the resulting decrease of discharge will be 36 per cent or so (expressed in units of toxicity exposure), which will affect first of all Budapest and its surroundings with the Danube as its main water stream. Capital investments related to the 36 per cent reduction of environmental load would entirely be implemented in communal sewage disposal.

5.3. Introduction of soil load fee

Urban development, industry and military activities have done significant damage to the soil and the underground water reserves in Hungary. The numbers of potential pollution sources and actual contamination occurrences have been steadily growing over recent decades.

Soil load fee (SLF) serves the purpose of protecting the soil and the underground waters. It would be imposed on the desiccation and storage of waste water. SLF would eliminate, or at least reduce, contamination from desiccation of domestic waste water (one of the key pollutants in urban areas) by making people interested in using a more convenient public utility service at a price that is close to the payable rate of soil load fee. In addition, it would also cut back on soil contamination caused by farmers. The applicable SLF rate is calculated on the basis of the quantity of water provided for the user, and varies with the degree of hazard and with the specific features of the area concerned. The base unit fee will amount to 30 HUF/m^3 (A) or 60 HUF/m^3 (B), depending on which version is introduced.

Households would bear 84 per cent of the total SLF payment burden, whereas large consumers would only pay up the remaining 16 per cent. It means that the majority of industries will not or will only slightly be affected by the imposed fee. (The only sectors concerned are electricity and heat generation, gas and water supply, food processing and mining.) SLF as an incentive can only work efficiently if the payable rate is set high enough to exceed investment costs of the utility or the sewage system. A gradually introduced lower rate (say 12 HUF/m^3) alone could only encourage hooking up to the already existing sewer system, and only in settlements other than Budapest.

Collecting WLF and SLF as a form of tax can slow down the pace of increasing the price of utilities (water and sewer systems) and can also provide the funds needed for the improvements. In that case, those two fees would not form part of the VAT base and would lower the profitability of the companies concerned. Consequently, no corporate taxes are to be paid on the sums involved, and they cannot be used for other purposes. In this manner, WLF and SLF may be guaranteed to be used only for development purposes. (What is more, since the investments are implemented by using public funds, they are subject to mandatory accounting and controlling.)

5.4. Increase and extended scope of environmental product charges

Regarding environmental product charges currently applied in Hungary, detailed assessments are needed to evaluate to what extent these charges have fulfilled their intended purpose, to determine whether they should be raised and at what rate, and to consider whether it is advisable to introduce new product charges or not.

The need to curb environmentally harmful activities and to accomplish the necessary environment protection tasks had required and justified a marked increase of the existing product charges. This is why Clean Air Action Group welcomed the Hungarian Government's decision to raise significantly the applicable product charge rates and to introduce new ones, to be implemented in three stages, starting from 15th February 2003. Raising the environmental product charges is also justified because up until now in most cases they have only been increased at a much lower rate than the inflation. (*See Table 5.4.*)

Table 5.4.: Changes in environmental product charges since their introduction in Hungary

Description	1995	1996	1997	1 Jan 1998 – 14 Feb 1998	14 Feb 1998 – 31 Dec 1998	1999	2000	from 15 Feb 2003	2004	2005
Environmental product charges on tyres (HUF/kg)										
New tyres approved by UN ECE (marked with "E"), and imports of old tyres to be restored (retreaded) under conditions and in quantities specified by separate laws	30	30	30	30	32.4	35	38.5	55.7	78.6	86
Imports of restored (retreaded) old tyres approved by UN ECE (marked with "E")	none	none	none	none	none	45	48.3	70	90	110
Imports of old tyres to be restored (retreaded) under conditions specified by separate laws	none	none	none	none	none	140	154	222.8	282.9	344
Imports of old tyres	120	120	120	120	129.6	350	500	1300	1700	2100
Environmental product charges on packaging materials (HUF/kg)										
Plastic, PVC, materials containing PVC	10	10	10	10	11	11.5	12.7	25.5	29	30.4
Combined	8	8	8	8	9	11.7	15.2	30.4	35	36.8
Aluminium	5	5	5	5	5.4	5.5	5.6	11.1	13	13.7
Metal (except for aluminium)	4	4	4	4	4.3	4.3	4.3	8.8	10	10.5
Paper, wood, natural textiles	3	3	3	3	3.3	4.3	5.6	11.1	13	13.7
Glass	2	2	2	2	2.2	2.1	2.1	4.1	5	5.3
Other	5	5	5	5	5.4	5.5	5.6	30.4	35	36.8
Environmental product charges on fuels (HUF/litre)										
Motor petrol	2	2	2	2.3	2.3	2.6	are incorporated in excise duties			
Diesel oil	2	2	2	2	2	2.25	are incorporated in excise duties			
Environmental product charges on batteries (HUF/kg)										
Batteries filled with electrolyte	38	38	38	38	41	45	50	89.1	100.3	112
Batteries not filled with electrolyte	38	38	38	38	41	63	70	124.3	140	156
Environmental product charges on other petroleum products (HUF/kg)										
Lubricating oil	none	none	none	60.8	68.8	89.9	74.5	88	92.4	97
Environmental product charges on refrigerators and cooling agents (HUF/piece, HUF/kg)										
Environmental product charge rates applicable to new refrigerators										
Nominal refrigerating capacity	(HUF/piece)									
up to 120.00 litres	600	600	600	600	650	812.5	1016	1470	1866	2262
120.01–250.00 litres	1080	1080	1080	1080	1170	1462.5	1829	2647	3360	4072
above 250.01 litres	2800	2080	2800	2800	3020	3775	4719	6829	8667	10504
Quantity of coolant	(HUF/piece)									
up to 0.50 kg	150	150	150	150	162	202.5	253.2	366	465	564
0.51–2.00 kg	270	270	270	270	290	362.5	453.2	655	832	1010
above 2.01 kg	700	780	700	780	780	950	1187	1717	2180	2642
Cooling agents (HUF/kg)										
Hard freon and CFC mixture	250	250	250	250	270	none	none	none	none	none
Soft freon and HCFC mixture	100	180	100	180	135	none	none	none	none	none
HCFC and HCFC mixture	none	none	none	none	none	147.5	185	546	693	840
Environmental product charge rates applicable to imported used refrigerators										
Nominal refrigerating capacity (HUF/piece)										
up to 120.00 litres	600	600	600	600	650	3250	4864	9046	12808	15680
120.01–250.00 litres	1080	1080	1080	1080	1170	5850	7316	16286	21208	27580
above 250.01 litres	2800	2080	2800	2800	3020	15100	19876	42018	54608	71080
Quantity of coolant (HUF/piece)										
up to 0.50 kg	150	150	150	150	162	810	1012.8	2233	3000	3980
0.51–2.00 kg	270	270	270	270	290	1450	1812.8	4033	5300	6980
above 2.01 kg	700	780	700	780	780	3800	4750	10574	13800	18080
Cooling agents (HUF/kg)										
Regenerated CFC and CFC mixture	none	none	none	none	none	1748	2420	5387	banned	banned
HCFC and HCFC mixture	none	none	none	none	none	598	737.5	1642	2208	2980
Regenerable HCFC	none	none	none	none	none	none	none	1260	1700	2380
Regenerable CFC	none	none	none	none	none	none	none	1260	banned	banned
Environmental product charge on thinners and solvents (HUF/kg)										
Thinners and other solvents	none	none	none	none	none	none	none	200	210	221
Environmental product charge on paper used as advertising medium (HUF/kg)										
Paper used as advertising medium	none	none	none	none	none	none	none	13	19.5	26

Source: Appendices of annual state budgets

We were glad to see that in keeping with our former proposals, as from 2003 the scope of environmental product charges is extended over thinners and solvents as well, the production and use of which cause serious harm to the environment and which can be substituted by other, more environmentally friendly products.

The primary objective of introducing environmental product charges on thinners and solvents (mainly implying lacquers and paints) is not to raise the funds needed to cover the costs of removing the resultant damage or eliminating the produced waste, but rather to make those responsible pay for the environment pollution they cause and **to encourage them to restructure their production in an environmentally friendly manner**. Larger companies using state-of-the-art technologies are capable of manufacturing paints that are qualified as environmentally friendly products – such paints actually account for nearly 50 per cent of the Hungarian production – and so it is reasonable to promote the general use of such paints and to increase their market share. The generated funds should be spent partly on supporting the establishment of a uniform advanced qualification system to classify products into appropriate hazard categories, and partly on awareness raising programmes to further a shift in people's attitudes.

We do not think that it would be right to put into effect a former plan of the Hungarian Government to impose environmental product charges also on paper used as information carrier medium. This measure would result in an increased tax burden to be borne by cultural products which contribute to improving citizens' access to culture, education and information (and, last but not least, also to environmental awareness raising). Most of these publications are designed and produced for long-term use (e.g. books), which means that in the foreseeable future they will not be discarded as waste. Considering the environmental policy aspects of the issue, such regulation would also be counter-productive since it would provoke antipathy just in those who should be definitely won over to the cause of environmentalism. Another factor to be taken into account is that almost all member states of the European Union use preferential or extra preferential VAT rates as a means to support products which contribute to propagating their national culture and language. For example, even Great Britain, homeland of the most universally used language in the world, applies a 0 % VAT rate to books, newspapers and magazines. Consequently, environmental product charges planned to be levied on paper used as information carrier medium would weaken the position of the Hungarian culture and language. However, we think that full support should be given to plans of imposing a product charge on paper, if its scope is limited to paper used as advertising medium (leaflets, etc.).

Accordingly, Clean Air Action Group agrees with the decision that as from 15th February 2003, paper used as advertising medium is subject to the payment of an environmental product charge in Hungary.

In connection with environmental product charges it is worth remembering that the "polluter pays" principle is a key principle of the European Union and a basis for the harmonization of legal regulations (included, quite rightly, in the currently effective Hungarian environmental protection law as well). This is why we think that claims by producers to have a right to dispose of the paid product charge are unfounded. Revenues generated from this source should be regarded as a (usually only partial) compensation for the damage caused by the pollution and should be used in the most efficient manner possible to promote the interests of environment protection (e.g. for the purpose of reducing the quantity of disposable wrapping).

5.5. Increased mining taxes

We are proposing an increase of mining taxes to a rate which enables the Hungarian state to collect substantial additional revenues from this source. The taxes could serve the purpose of protecting Hungary's non-renewable natural resources and irreplaceable reserves of raw materials as well as relieving the adverse environmental effects of mining activities. Unfortunately, recent years have seen a declining trend in collecting revenues from mining taxes: in 1999, such revenues only amounted to less than one third of the revenues collected in 1995. This is especially sad because these revenues are by far less than the costs of restoring the damage caused by mining. It is essential, particularly in the light of Hungary's EU accession, to increase the funds available for this purpose. EU sources could also be acquired and involved in such projects.

a) Mining taxes on hydrocarbons

The largest part of mining tax revenues comes from taxes paid on the production of hydrocarbons (in 2001, HUF 12.1 billion from the total of HUF 13.9 billion).

Domestic prices of hydrocarbons are usually adjusted to the price of imports (in the case of natural gas, this is effected with a delay of 9 months). It would be an untrue statement to claim that at present MOL Co. incurs losses on the domestic sales of hydrocarbons. In 1999 the actual prices of imported natural gas reached the lowest level recorded in the previous few years by falling to 15.08 HUF/m^3. In 2001, import prices of hydrocarbons increased to peak levels, while in 2002 their annual average has dropped slightly.

If mining tax rates are determined on the basis of the import price level, originally proposed by Clean Air Action Group – which will soon be effected as a result of a recent resolution of the Hungarian Government –, we may reckon with the following impacts:

- Petrol station retail prices of fuels would not change, for they would continue to be set on the Mediterranean price base. Raising the price of petroleum produced within Hungary to the Russian import price base would not put an end to the profitable operation of MOL Co.'s petroleum refining plants. It would only lower the rate of extra profits realized as a consequence of the (in our opinion, unlawful) undervaluation of the Hungarian production.
- Even today, domestic natural gas prices are higher than the increased import purchase prices. The costs of imports will drop in the wake of subsiding international price fluctuations. In addition, it is advisable to change over the most expensive imports which use the Baumgarten pipeline to direct Russian barter purchase transactions. (At present, even the Baumgarten natural gas is of Russian origin. It is transited through the Slovak Republic into Austria, and arrives from there into Hungary, which means that it makes an unnecessary round trip in this region. This, again, contributes to making it more expensive than direct imports. On the other hand, this does not enhance Hungary's security, because more than the half of EU natural gas imports comes from Russia. As a consequence, if Russia fails to deliver, natural gas could not be procured from Western Europe either.)
- The Hungarian state budget would realize extra net revenues worth HUF 40 billion annually. This would bring about double benefits. On the one hand, personal income tax payments can be lowered by this sum, which in turn – among other favourable impacts – would restrain inflation. On the other, extra profits that are realized and may be repatriated by foreign shareholders would diminish, and Hungary's balance of payment would be improved by this amount.

Considering all the above factors, we may conclude that it is economically justified to raise the rate of mining taxes, and, in our opinion, it is also mandatory under Hungarian laws. We propose that as from 2004, mining taxes on petroleum and natural gas be raised by an additional HUF 40 billion over and above the current HUF 16 billion, i.e. their total amount should be at least HUF 56 billion.

Since the start of hydrocarbon mining in Hungary, no significant recultivation has been carried out. On the other hand, Hungarian hydrocarbon resources are being rapidly depleted. Hungary cannot afford it that revenues realized from the current higher prices are not spent on rehabilitation. MOL Co., naturally, seeks to meet the expectations of its (predominantly foreign) shareholders to maximize its profits, which, after taxation, may be repatriated by foreigners. (This contributes to the deterioration of Hungary's balance of payments as well.) If the recultivation is implemented, it will create a market for the Hungarian environmental protection industry, adding to its strength and possibly developing its export capabilities.

The austerity measures of the so-called Bokros package have taken away from the value of mining taxes the 10 per cent portion which was supposed to be used for the elimination of environmental damage caused by mining activities. In our opinion, this was contrary to the Hungarian Constitution and the provisions of the Act on Environment Protection, which is another reason why it is necessary to restore this part of the mining tax.

We recommend that part of the amount resulting from the increase should be returned to the companies concerned for the purpose of restoring the damage caused by mining. This would enhance their economic value and performance. For instance, the stock exchange rate of MOL Co.'s shares could also be improved as a result.

b) Mining taxes on mineral raw materials other than hydrocarbons

At present, the Hungarian state budget only realizes negligible revenues from mining taxes paid on construction material type mining products: only less than HUF 0.7 billion in 2001, despite registered production totalling 51.3 million tons. (We may presume that considerable volumes are produced illegally, too, over and above the registered amount.) The average mining tax payment on construction materials came to 13 HUF/ton, which is a ridiculously low value. Besides that, 5.5 million tons of ceramic construction materials were also mined in 2001, and a mere HUF 27.6 million were paid as mining taxes on those materials, that is, only HUF 5 per ton. (*See Table 5.5.)*

Table 5.5.: Production of mineral raw materials and mining taxes paid on production in 2001

Mineral raw material	Production of mineral raw materials (million t)	Mining tax paid upon production (million HUF)	Mining tax paid per 1 ton (HUF/t)
Black coal	0.57		
Brown coal	5.26		
Lignite	8.04		
Coal in total	**13.87**	**1008144**	**72.67**
Bauxite	1.00		
Manganese ore	0.04		
Uranium ore	0.00		
Mineral mining raw materials*	3.08		
Ores in total	**4.08**	**135125**	**33.13**
Cement and lime raw materials	5.39		
Construction and trim-stone raw materials	13.79		
Sand and gravel	32.16		
Construction raw materials in total	**51.34**	**666760**	**12.99**
Ceramic raw materials	**5.52**	**27589**	**5.00**

*Dolomite, magnesite, magnesium silicate
Source: Hungarian Mining Office (www.mbh.hu)

Low rates of mining taxes have multiple adverse effects:

New raw materials are used even when the secondary use of part of the construction materials could be arranged on the spot, which would also alleviate environment pollution caused by transportation.

These mineral products are non-renewable raw materials, so the mined materials cannot be replaced. As a consequence, Hungary's natural resources are reduced by their volume.

Mining itself entails considerable environment pollution.

Low mining tax rates provide false orientation to business organizations, which is clearly illustrated by the following example of exports into Austria:

The ex border average price (inclusive of the transportation costs up to the country border) of the 715 thousand tons of stone, pebble and sand exported into Austria in 2000 was as low as 2.8 EUR/ton, which testifies to the extremely low rate of mining taxes.

It would be worthwhile to look into the question of who might possibly be motivated to export such products into Austria at an average price of only EUR 2.8 per ton, considering that transportation costs alone are higher than that. These transactions did not only cut down state budget revenues from mining taxes, but also caused damage to the environment and infrastructure of Hungary by transporting such volumes of goods. Moreover, secondary utilization of waste construction materials is hindered or sometimes even made impossible by such practice.

We recommend that **instead of the currently effective rate of a few tenths of per cent the applicable rate of the mining tax should be 12 per cent of the in situ value** (i.e. the value near the mining production value).

6. Protection of green areas and arable land; taxes promoting environmentally friendly agriculture

The area of arable land, one of Hungary's most valuable assets, is decreasing at a quick rate. The area of land taken out of agricultural utilization comprised only 6.6 per cent of the country's total area in 1938. Then this portion increased to 11.5 per cent in 1990, and in 1996 it already reached 13.8 per cent. (It is important to note that the pertinent statistical data have not properly reflected the real changes taking place in Hungary in recent years. Therefore we recommend that in addition to traditional statistical methods, space photographs should also be utilized for the continuous monitoring of changes in land use practice.) Industry, mining, transport, commercial and residential buildings, as well as other facilities occupy more and more valuable land – virtually irreversibly. Growing suburban areas, exploding road transport, ever-growing numbers of shopping centres and other green-field investments cause serious harm not only to the physical environment, but often to the entire national economy and society as well. One of the main reasons of the problem of destroying arable land and green areas can be found in the inappropriate price system. The price of land in Hungary is only a fraction of that in Western European countries, but even western prices fail to represent all the factors that determine the real value of land. If implemented, our proposals listed below, could help land prices move closer to the real values. They could also encourage investors to **prefer brown-field sites** (areas of land, not covered with green surfaces, which have been deteriorated due to former industrial or other use) **to green-field ones** for their investments, which would be beneficial for both the environment and urban development.

Similar measures are planned to be taken in several EU countries. In Germany, the Parliament's Human and Environmental Protection Committee (Enquete-Komission „Schutz des Menschen und der Umwelt") made a proposal in its report completed in 1998 to introduce taxes of this type in order to protect arable land and green areas. The measures proposed by

the Committee are estimated to reduce the annual shrinking of arable land by 90 per cent by 2010, as compared to that of 1995. The British Government is also considering using taxes as means of attempting to protect green areas and to restrict the area of land available for housing, industrial and road construction purposes.

6.1. Increased land protection fees

Paragraph (1) of Art. 52 of Act LV of 1994 on Arable Land says: „When arable land is utilized for other than agricultural purposes, a one-off land protection fee shall be paid to an account specified by a separate statute."

At present, however, land protection fees are so low and there are so many ways to gain exemption from the payment that they do not provide adequate stimulation to preserving arable lands. Therefore, the applicable rates of land protection fees should be multiplied. Raising the fees could prevent the squandering of arable land, one of Hungary's most important national assets.

The goal of this measure is not to generate extra revenues, but to force back markedly the utilization of arable land areas for other than their core purpose. Unfortunately, however, current land prices in Hungary are so low that, despite a high rise in the rate of the fees, it cannot be expected that thereby we can provide adequate protection for the country's arable land. Nevertheless, even so, some results may be achieved; therefore we deem it an urgent task to carry into effect the increase.

The current practice of collecting land protection fees should be investigated to find out whether they are in fact always properly collected. If the findings of such assessments indicate the contrary, appropriate measures are to be taken without delay.

6.2. Extended scope of land protection fees

Act LV of 1994 on Arable Land defines arable land as „land that is registered in the outskirts of settlements in the cultivation category of plough-land, vineyard, orchard, garden, grassland, reeds and forest, or as fish pond."

Land protection fees should be imposed not only on the types of land that are defined by effective law as arable land, but also on any other areas which are at present green areas or non-built-up areas (potential green areas). Furthermore, land protection fees should be significantly higher for such areas within the boundaries of towns and villages than for areas in the outskirts of settlements. Contrary to the currently effective provisions of Act LV of 1994 on Arable Land, land protection fees should also be paid when arable land areas or non-built-up areas are intended to be destroyed by housing constructions or by any other means.

6.3. Environment-oriented taxes on agricultural production

Agriculture needs to operate in a way which causes the least possible harm to the environment. This is an indispensable prerequisite to making the Hungarian agriculture sustainable also in the long run and to enable **Hungary to join EU agrarian programmes**. Environment-oriented taxation imposed on agricultural production could be one of the means to achieve those objectives. The taxes can be divided into three groups:

a) progressive ecological taxes on different types of agricultural activities; the rate would vary depending on the degree the activity concerned fits in with its environment;
b) bracket progression of ecological taxes depending on the intensity of land use;
c) differentiated taxes on unit expenses by agricultural production sites.

Further research is necessary to calculate the extra revenues arising from such measures. We recommend that the realized revenues should be used for agriculture-related environment management purposes.

6.4. Transformation of the agrarian subsidization system

The European Union's agrarian subsidization system (CAP) does not promote either the competitiveness of the Hungarian agriculture or nature-friendly farming. It jeopardizes the still existing comparative advantages of the agrarian sector. The **funds flowing in as part of the CAP cause more damage than benefits**, because they – as production subsidies – **promote**, and contribute to, **the widespread use of intensive farming methods**. It is necessary that independent expert analyses be prepared on the subject.

In the European Union, economic pressure groups interested in intensive agricultural production have extremely powerful interest enforcement capabilities. Their influence can be felt in Hungary, too. In our opinion, it is unacceptable that by using periodical overproduction crises as the reason, they expand certain production lines that are harmful to the environment and human health, and can only be made economically viable by substantial tax allowances and subsidies: such as bio-petrol, fuels produced from alcohol, genetic engineering.

From a market and consumer protection viewpoint, we think that similar dangers are implied by the announcement of the food processing sector saying that as from 2004, they intend to procure basic materials (pork, cereals and vegetables) from the cheaper EU markets. In the long run Hungary is interested in preserving and reinforcing the practice of giving priority to the quality, rather than the quantity, of production (animal husbandry without using antibiotics, broad range of varieties, fruit-growing in river flood basins, etc.).

We recommend that the system of agricultural subsidies should be transformed in a manner to increasingly promote the implementation of the National Agrarian Environmental Protection Programme. This would involve regrouping of funds within the budget of the Ministry of Agriculture and Rural Development – according to our proposal, in a value of HUF 20 billion in 2004.

6.5. Introduction of a charge on covering large areas

Large areas covered by concrete or asphalt eliminate the green areas needed for biological assimilation, which significantly deteriorates the state of the environment. Additionally, these hard-covered surfaces are unable to absorb rainwater; therefore the surrounding areas require larger sewer capacities, which entail substantial extra costs. We are proposing a charge on covering large areas to be paid according to the type of the covered surface.

Such charges have been successfully used, for instance, in Berlin. The city's entire area had been surveyed with a resolution of 5 square metres (!) to identify covered surfaces (rooftops, parking lots, roads, etc.). Thereafter, survey data were sent to each real property owner for confirmation. Based on the data, the charge to be paid on covered surfaces was calculated. Within a short period of a couple of months, total covered surfaces in the city were reduced by some 20 per cent. Owners of real properties were able to achieve this by using the following methods:

- on flat or slightly rising rooftops green roofs are formed;
- concrete surfaces are broken up in yards, and are replaced – where indispensable – by "green concrete" (concrete grate with grass growing in between) or by permeable crushed gravel;
- on the pavements, concrete or asphalt covers are substituted by cover tiles laid in sand (not in concrete!).

Pavements, walkways and squares may have similar stone or cast-stone covers, which have multiple simultaneous advantages:

- they absorb precipitation, and then evaporate it when necessary, which creates air movement and a local cooling effect;
- soil will not be destroyed under the cover;
- it is easier to carry out repair work on public utility infrastructures;
- they are much more appealing to the eye.

We think that it is worth considering that the charges to be imposed should increase progressively above a certain size (e.g. 500 square metres of unbroken covered surface). Thorough preparatory work is needed prior to imposing the charge. Once this work is completed, the Hungarian Parliament should enact a law to specify the conditions and rates of the charge, and make the introduction mandatory for all local governments – following a period allowed for making the necessary preparations.

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Alternative State Budget of the Czech Republic for the year 2004, with a perspective until 2013

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Introduction

The state of the public finances is currently one of the most pressing economic problems of the Czech Republic. The annually increasing deficits and the high share of mandatory expenditures of the State Budget have been keeping our statesmen and politicians wide awake at night.

Another problem of the public finances is their 'greening'. Taxes and subsidies are instruments influencing not only the amount of goods produced and utilities maintained, but they can also support activities beneficial for the environment or, on the contrary, cancel out possible preferences for environmentally harmful activities.

Unfortunately, the government-designed public finance reform that was approved by the House of Representatives of the Czech Parliament in late September 2003, does not concern itself with any significant efforts to green the country's public finances, even though the government bound itself to the introduction of an environmental tax reform in its August 2002 Declaration of Intent. This situation repeats in the State Budget for 2004, which was adopted by the Czech Parliament in December 2003.

Therefore, it is our objective with this material to prove that the tax and subsidy systems can be an efficient tool to solve environmental problems without seriously threatening the fiscal stability. At the same time, they can contribute to a higher development rate, and, in the longer term, to better competitiveness of domestic businesses.

The idea of greening state budgets also gave rise to the initiative of Environmental Fiscal Reform which has been active on the European level for several years, co-ordinated by the Brussels-based international NGO European Environmental Bureau. The Czech Republic is represented in this network by the Society for Sustainable Living and Charles University Environmental Centre. A Platform for Environmental Fiscal Reform has been created in the Czech Republic, on which more information can be found on the internet at http://www.czp.cuni.cz/ekoreforma/cz/default.htm[1]. At the same time, a national working group on an alternative state budget is functioning on an impulse by STUZ.

We are complemented in this initiative by the Hungarian Levegő Munkacsoport (Clean Air Action Group), the Polish Instytut na rzecz ekorozwoju (Sustainable Development Institute), and the Danish Det Økologiske Råd (Ecological Council). The alternative state budgets for Hungary, Poland and the Czech Republic, in English, are available online as well as in print.

The Czech activities have resulted in this material – the Alternative Proposal for the State Budget of the Czech Republic for the (Hypothetical) Year 2004, with a proposal for the future development of the public finances, embodied in an 'ideal state' of the 2013 state budget.

The principals of this Alternative State Budget are supported by other Czech movements and organizations, namely by the Hnuti DUHA (Friends of the Earths Czech Republic) and Green Cicle.

Your comments on and suggestions to this material are welcome by email to hana.foltynova@czp.cuni.cz and milan.scasny@czp.cuni.cz.

The Authors

[1] **The Platform for Environmental Fiscal Reform in the Czech Republic** is a free association of people and institutions whose aim is a correction of the economic environment so that it better reflects the value of natural resources, energy and assimilation capacities of environment, and motivates their considerate use. The members of the Platform consider a reform of the fiscal system (an environmental fiscal reform) a necessary step to fulfil its goals. The activities of the Platform are focused on information exchange, holding seminars and working meetings, and research co-operation.

Prague, October 2003

I. Proposal for an Alternative State Budget – Summary

Taxes are indispensable to any economy and modern society. Our society consists of a number of public spheres such as the national defence, security, law enforcement, public administration, healthcare and education, which are secured to various degrees by the public sector, and whose costs it is necessary to cover. The amount of property owned and utilities provided by the state is a result of a social consensus demonstrated in democratic elections. Unless the state wishes to sell off its assets or put future generations in debt, taxes are the only source from which to cover the costs of these.

Although taxes bring down the efficiency of any economy, they are a tolerated evil. As we have to suffer this evil anyway, would it not be wiser and more sustainable to obtain the financial means for the upkeep of public property and utilities from taxing directly such consumption of goods that leads to emissions, causes damage to nature's life support systems and drains resources, instead of burdening with taxes human effort and inventiveness? A tax shift in order to green the public budgets is supported by the existence of negative external costs of the production and/or consumption of certain goods. Many an environmental problem is the result of activities from which some benefit but others suffer costs and damage. Only their exact sums are disputable, which makes it more difficult to agree on the right prices.

Taxes are not only a means of funds collection for the state treasury. Their other, no less important, function is that of allocation or stimulation. They result in changes in behaviour both on the production side and on the consumption side, thus enabling us to reach standardised targets for instance in environmental protection. They influence the economic decisions both of companies and individuals, and thus, the entire economy. The taxation of anything stimulates a decrease in demand (or production) – be it cigarettes, pollution, home ownership, or jobs. Taxation therefore influences the behaviour of all consumers and producers.

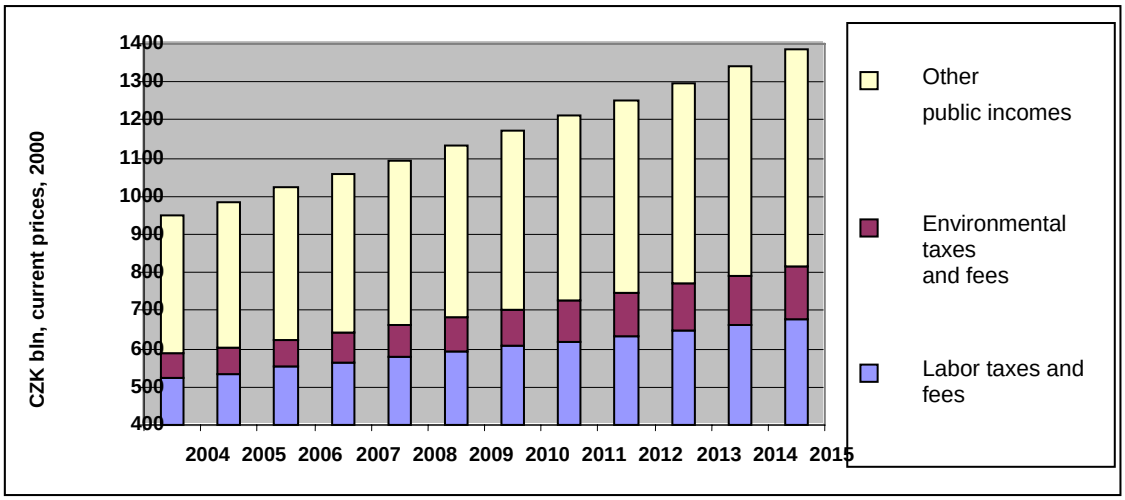
While preparing this Alternative Proposal for the State Budget of the Czech Republic, we made the following assumptions:

a) An alternative proposal for a state budget will assume a **zero increase of the current taxation load**. We demand the **introduction of a revenue-neutral reform of the State Budget**. Our proposal to increase environmental taxes in the incomes side of the budget is compensated by a decrease in income taxes and social security contributions by employees and employers. The Hungarian version of the alternative budget (Lukacs 1999), for instance, differs from our approach in assuming an increase in both the incomes and expenditures of the state budget. The public incomes in the period 2004-2015 are kept at a constant level of about 40% of the GDP; the structure of public budget incomes is shown in Graph 1.

b) We are aware of the fact that the relevant changes in the tax and subsidy systems cannot be made overnight. **Larger legislative alterations require time and can only be implemented over longer periods.** We have therefore identified two stages of implementation for the proposed changes: in the short-term, i.e., the next few years, when legislative changes can take place and a long-term horizon of 2011-2015 when the taxation structure and rates will reach their 'ideal' levels for the current year.

c) The government proposal of the 2004 State Budget was approved by the Parliament of the Czech Republic, but we have still prepared its alternative version. **Therefore this alternative 2004 budget can only be considered hypothetical**, showing how the state budget and the public budgets would appear had they contained a stronger environmental element. For the next decade, we suggest gradually modifying selected tax rates so that the 'ideal' level and structure of taxes are reached in 2013 in accordance with the environmental tax reform principles. This hypothetical 2004 alternative budget includes rates and budgetary structure similar to those calculated in our alternative proposal for 2013.

Graph 1: Structure of public budget incomes in the Czech Republic, 2004-2015



Source: Charles University Environment Centre

d) In this proposal, a first of its kind, **we focus mostly on the State Budget**, dealing with the non-budgetary funds only marginally (e. g. with the State Fund of Transport Infrastructure in the case of excise duties on fuels). Also, our attention is not focused on the regional administration budgets. We intend to broaden the scope of the future alternative proposals in order to handle the public budgets in their complexity.

e) **The rule of income neutrality can be disturbed** by these three causes:
   i) by observance of the existing rules about special-purpose-binding of the state budget incomes;
   ii) by implementation of compensations for low-income groups of households, which will not be able to profit from the lower labour costs (e.g. as social security fees);
   iii) by using a part of the extra state budget incomes to cover an increase of expenditures for protection of the environment.

   We call for observance of the state budget income neutrality in the largest rate as possible, but we can accept some exceptions, esp. for solving of induced negative social impacts.

f) We realize the necessity to **establish a stability of the public finances incomes**. The tax rates which are suggested to be increased, include not only the ecological criterion – the impact of consumption or production of goods on the environment -, but also the criterion of stability of the public finances (the relatively anaesthetic consumption of these goods on a price change in a short and mid-term period).

g) Policies or measures lack point if introduced as shock therapy. **Behaviour change must be significant, but the introduction of the measures** leading to such change **should be gradual**. All entities – businesses, households, and individuals – must have enough time to prepare for the new situation and adapt to the new conditions in their decisions to buy technologies, to choose production processes, or even to decide what to produce.

h) The level of tax rates is of primary importance to environmental efficiency, and will therefore be increased. It is, however, much more important for the strategic, rational and efficient behaviour and decision-making of businesses and households to be able to predict how the taxes, thus also prices, will develop over the next five, ten or even twenty years. Everyone, therefore, must have a **clear and credible image of the future development of the prices** of electricity, for instance, or natural gas, coal and renewable energy sources, so that they can include this information in their day-to-day decisions. **Long-term stability of the business environment** is thus a prerequisite for a shift from obsolete, inefficient technologies and processes to new, more modern and environmentally friendlier ones.

The Alternative Budget Proposal in Brief

This part contains a comprehensive overview of the changes of the State Budget for 2004 and of the ´ideal´ State Budget for 2013.

Firstly, let us take a look at definitions of some terms used in this material. **"State Budget 2004"** represents the proposed State Budget of the Czech Republic for the Year 2004 as it was approved by the Parliament of the Czech Republic in the beginning of December 2003. **"Proposal 2013"** represents a hypothetical budget based on the state budget for 2004 with consideration of the inflation rate and GDP predictions[2] while maintaining all relevant proportions.

„Alt. Proposal 2004“ and **„Alt. Proposal 2013,“** respectively, represent our proposals for the state budget for the (hypothetical) year 2004 and 2013, respectively, i.e. what the budgets could look like if all the changes proposed could take effect.

The alternative budget proposal assumes, above all, an increase in excise duties on energy products, taxes in transport, and fees for the consumption of non-renewable energy sources. We also calculate with some revenues from the value added tax both due to an excise duty increase and to shifting central heating to the regular VAT rate. As an innovation, we propose to transfer the electricity tax into budget bracket 12. A reduction, on the contrary, will be made of the social security rates.

The revenue-related neutrality of the operation is hindered by the revenue definition of certain taxes, namely the excise duty on hydrocarbonated fuels and lubricants utilised in transport. Part of the additional revenues could be pumped into non-budgetary funds if the ETR was introduced. This concerns particularly the State Fund of Transport Infrastructure (SFDI) and the State Environment Fund (SFZP). A certain share of the payments would also flow directly into communal budgets, especially from the revenues generated by payments for the use of non-renewable energy sources, of which 75% is received by the respective community. To maintain neutrality, state budget expenditures on other items would have to be reduced.

[2] According to (MF, 2003)

One of the primary background materials for the preparation of this alternative budget was the Ministry of Finance proposal dated 4 July 2003 and titled 'A proposal for the expenditure limits of the 2004 state budget chapters,' which was presented to the Government of the Czech Republic and prepared with the conclusions of the June 30 Government Session. Besides other points, it provides for the medium-term expenditure framework for the state budget, the budget income and expenditure limits for the state budget chapters for 2004-2006, and the expenditures from the state funds for 2004-2006. The material was prepared using the Fiscal Targeting methodology[3]. Furthermore, we have used data from the 'Budgetary Perspectives for 2003-2006: The Concept for a Public Budget Reform,' approved by the Government Resolution No. 624/2003 in June 2003.

Detailed descriptions and justifications of the proposed changes can be found in Section III of this study.

The proposed changes are shown in the following tables, sorted on their type and branch according to the budget composition. Firstly, let us take a look at the 2004 budget, and then, at the 2013 budget. We shall begin with its incomes side.

Year 2004

Tax revenues can be increased by an additional sum of **approximately CZK 19 billion**, namely from the following sources:

- increased tax rates on energy under Law No. 353/2003 L.R. on Excise Duties (within that, CZK 7.0 bln for the state budget, and CZK 1.8 bln for the SFDI)	CZK 8.8 bln
- VAT revenue from the increased excise duty under Law No. 353/2003 L.R.	CZK 0.8 bln
- proposed increased rates of electricity tax, gas tax and coal tax	CZK 4.7 bln
- VAT revenue from heat (moving heat from the 5% VAT to 22%)[4]	CZK 3.2 bln
- cancelled tax allowances on so-called green diesel	CZK 1.4 bln

The revenues brought under the **already approved legislation amount to CZK 9.6 bln**, those generated by the introduction of **alternative budget proposals amount to CZK 9.3 bln**.

Of the total additional revenues from fuel excise duty equalling CZK 8.7 billion, the SFDI would receive approx. CZK 1.7 billion (i.e. 20% of revenues). The additional revenues for the state budget thus make up **approximately CZK 17 billion**, with another CZK 1.7 billion for the SFDI.

To keep the revenue-related neutrality of the operation, or maintain the total state budget income of CZK 754 billion, **other taxes would have to be reduced, e.g. the social security dues, by approximately CZK 9.2 bln, i.e. by 3.2%**.

[3] I.e., the government has bound to fulfil a certain fiscal goal in the medium term (3 years ahead). This goal defines the government's idea of the future development of public finance and its deficit, thus marking the limits for the future budget policy. The June 18, 2003, Government Session approved the parameters for a reduction of the share of public finance balance, state budget balance, and state funds balance on the GDP, the maximum balances of these budgets, and the range of measures to increase the incomes and reduce the expenditures for 2004-2006 (Government Resolution No. 592/2003).

[4] Including the reduction of VAT revenues from products whose consumption has decreased as a result of increased prices.

And how will the ETR impact on the expenditures side of the budget? The ETR should also be expenditure-neutral, or possible lower expenditures can contribute to the reduction of the public money deficit. The expenditure items with environmental impacts, sorted on their branches according to the budget composition, whose re-evaluation is proposed, are shown in the table in Section III B.

Table 1: Alternative state budget 2004 by budget composition (in CZK millions)

Budget composition	Indicator	State Budget 2004	Alt. Proposal 2004	Alt. Proposal 2004 /State Budget 2004
11	**Taxes on incomes, profits and capital revenues**	**179,800**	**179,800**	**1.00**
111	Taxes on incomes of physical persons	95,200	95,200	1.00
112	Taxes on incomes of corporate entities	84,600	84,600	1.00
12	**Taxes on domestic commodities and services**	**217,600**	**226,822**	**1.04**
121	Value added tax	133,400	136,553	1.02
	+ additional revenue from energy taxation under Law No. 353/2003 L.R. on Excise Duties	*814*	*814*	*1.00*
122	Special taxes and fees on domestic commodities and services (previously excise duty item)	84,200	90,269	1.07
	+ additional state budget revenue from energy taxation under Law No. 353/2003 L.R. on Excise Duties	*7,031*	*7,031*	*1.00*
13	**Taxes and fees on selected commodities and services**	**5,580**	**5,580**	**1.00**
133	Fees and collections in the area of environment	1,280	1,280	1.00
136	Administrative charges	4,450	4,450	1.00
14	**Taxes and custom duties for foreign goods and services**	**4,400**	**4,400**	**1.00**
15	**Property taxes**	**14,300**	**14,300**	**1.00**
16	**Social security, contributions towards state employment policy, and public health insurance**	**292,318**	**275,251**	**0.94**
161, 162	Social security, contributions towards state employment policy	292,318	275,251	0.94
	Including: revenues of pension contributions	242,281	242,271	1.00
1	**TAX INCOMES TOTAL**	**714,398**	**706,553**	**0.99**
2	NON-TAX INCOMES TOTAL	25,202	25,202	1.00
3	CAPITAL INCOMES TOTAL	1,188	1,188	1.00
4	SUBSIDIES RECEIVED	13,292	13,292	1.00
	STATE BUDGET INCOMES TOTAL	**754,081**	**746,236**	**0.99**

Source: State Budget for 2004, authors' original calculations.

Year 2013

Let us now look at the year 2013 in the same way. A comprehensive overview is made in Table 2 (itemised by the budget composition). The state budget for 2013 has been calculated using the 2004 state budget proposal, including the inflation and increases in the GDP for those state budget income items whose tax rates are related to nominal income.

The tax incomes of the state budget can be **increased by an additional sum of approximately CZK 110 billion**, namely from the following sources:

- introduction of an electricity tax	CZK 26 bln
- introduction of a natural gas and oils tax	CZK 14 bln
- introduction of a coal tax	CZK 9 bln
- increased excise duty on fuels	CZK 48 bln
- relevant VAT revenues	CZK 12 bln
- transformation/introduction of a raw minerals tax	CZK 1 bln

The SFDI revenues would increase by the additional incomes from the taxes introduced and/or modified in the transport sector totalling **approximately CZK 14-15 bln**. The alternative state budget proposal assumes maintaining the existing SFDI incomes from hydro carbonated fuel excise duties. The total sum of the additional revenues of these excise duties would represent an income for the state budget and would be recycled in the form of a reduction in other direct taxes.

Communal budgets would rise by some **CZK 2.2 billion** due to the raw mineral tax.

To maintain the revenue - related neutrality of the operation – i.e. to keep the total state budget incomes on a level equal to that before the reform – **other taxes ought to be reduced, namely social security dues, by the mentioned CZK 110 billion, i.e. by 22%** of the supposed simulated volume in 2013.

Since tax revenues for the SFDI are conditioned to come from the taxes in transport, especially due to the taxation of road transport costs, the neutrality principle need not be applied strictly for these types of revenues. The revenue neutrality principle for the public budgets, however, can be reached by further reducing some other direct taxes (by approximately CZK 14-17 billion), at the expense of public expenditures that would have to be abandoned.

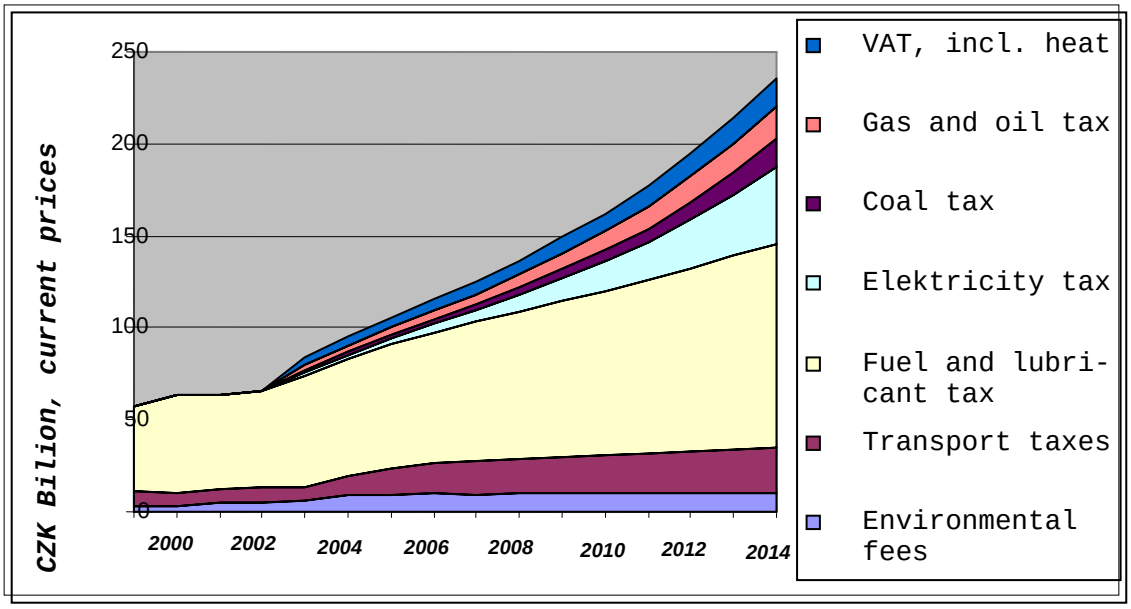
Table 2: Alternative 2013 state budget by budget composition (in CZK millions)

Budget composition	Indicator	2013	Alt. Proposal 2013	2013 / Alt. Proposal 2013
11	**Taxes on incomes, profits and capital revenues**	**303,768**	**303,768**	**1.00**
12	**Taxes on domestic commodities and services**	**301,170**	**410,489**	**1.36**
121	Value added tax	224,001	236,320	**1.05**
122	**Special taxes and fees on domestic commodities and services**	**77,169**	**174,169**	**2.26**
	- electricity, natural gas and coal tax		50,000	
	- fuel tax		47,000	
13	**Taxes and fees on selected commodities and services**	**2,163**	**2,913**	**1.35**
133	Fees and collections in the area of environment	2,163	2,913	1.35
16	**Social security, contribution towards state employment policy, and public health insurance**	**493,865**	**383,796**	**0.78**
1	**TAX INCOMES TOTAL**	**1,133,236**	**1,133,236**	**1.00**
2	NON-TAX INCOMES TOTAL	42,578	42,578	1.00
3	CAPITAL INCOMES TOTAL	2,007	2,007	1.00
4	SUBSIDIES RECEIVED	22,179	22,179	1.00
	STATE BUDGET INCOMES TOTAL	**1,200,000**	**1,200,000**	**1.00**

Development Between 2003 and 2013

The main proposed changes concern the excise duties on hydro carbonated fuels and lubricants, and furthermore, taxes on fuels, coal and electricity. Their individual shares and development between 2003 and 2013 are shown in the following graph.

Graph 2: Structure and development of environmental taxes between 2003 and 2013



The resulting share of environmental taxes on the total tax revenue should increase from the expected 6.9% of the total state budget incomes (and 2.8% of the GDP) in 2004, equalling approx. CZK 65 bln in absolute figures, to about 10.0% of the total public incomes (and approx. 4.2% of the GDP), or about CZK 195 bln absolutely, expressed in the 2013 current prices. The largest share of tax revenues is from the taxes on hydro carbonated fuels and lubricants.

II. Rules for Making an Alternative Budget

Although this material is primarily focused on the contribution of the public finances to the resolving of the environmental protection problems, it also takes into consideration the broader framework for the functioning of the public finances, its undesirable as well as positive trends and impacts, as discussed further on in this part of the study.

We assumed the following seven rules for the making of this alternative budget[5]:

1. Reduce labour-related costs
2. Promote environmental protection
3. Internalise external costs
4. Increase tax system efficiency, and fight tax evasions
5. Reduce environmentally harmful subsidies
6. Develop human resources
7. Prepare for EU membership
8. Long-term deficit trend and public debt increase
9. Persevering elements of inefficiency and the lack of co-ordination

Let us look at these rules in more details.

1. Reduce labour-related costs

Since the objective of the environmental tax reform (ETR from now on) to change the structure of the tax system so that it supports human labour and innovation as factors that are positive both for the society and environment, it is the fundamental element of our proposal to reduce the social security rate and income tax rates. The target reduction of the social security rate to an 'ideal' state of 2013, reaches 22 % in our proposal (the total paid by employee and employer).

2. Promote environmental protection

In this proposal, we have concentrated mainly on the following areas of environment protection:

- strengthen existing environmentally beneficial activities,
- control the environmental and life-quality impacts of economic activity,
- regulate environmentally harmful activities with economic instruments.

We are fully identified with the claim that economic instruments are more relevant for a market-oriented economy and allow for an economic use of environmental wealth and services, they help reach goals more efficiently and at lower costs (for more, see e.g. OECD 2001a).

Moreover, appropriately chosen and implemented economic tools result in the support of environmental efficiency and encouragement of innovation; they bring in additional income for the public budgets, and increase administrative efficiency, while reducing bureaucracy and standard regulation.

3. Internalise external costs

There are a number of activities that have negative environmental and health impacts, but their originators do not bear these costs – they impact on the entire society. Economical theory calls such costs negative external costs, or negative externalities. Negative externalities

[5] Similar rules were compiled by Clean Air Action Group in Hungary (Lukacs 1999) – they include the reduction of labour costs, internalising the external costs, reducing the socially harmful subsidies, limiting the black economy, protection of the national economy, human resources development, social security development, preparation for EU membership, and environment protection.

arise as a consequence of market failure, especially of its allocation function. This function can be limited due to the existence of a market-dominant business, external effects, and public property. To internalise externalities means to include these costs in their originators' prices. Internalisation of externalities makes the originator bear the additional social costs of their activity, whereby the 'polluter pays' principle is fulfilled.

Furthermore, the allocation function distortion will be thus eliminated, and the market economy will function better (i.e., closer to the performance optimum). For these reasons, the internalisation of external costs impacts positively on the economic output, human health and vital conditions of the population. It is a precondition for a more precise formulation of the originator's tax load to estimate their external costs as accurately as possible. The Charles University Environmental Centre (COZPUK) is currently researching for an estimation of the external costs associated with the pollution from the energy industry and transport, applying the international method ExternE. Besides, the Transportation Research Centre is concerned with quantifying the externalities of transport. Several studies on transport externalities have been made in the Czech Republic, using three different methods and estimating these external costs at 3-5% of the GDP, equalling approximately CZK 130 billion.

4. Facilitate tax system and fight tax evasions

The last rule for making the alternative budget is to facilitate and make more transparent the system of taxes and fees, improve the transparency of administration, and reduce the instances of tax evasion. The evasions are associated especially with the collection of direct taxes. Therefore, a shift of the tax load towards indirect taxes may reduce the grey economy and the tax evasions, and thus increase the public incomes. This criterion was important for the proposed adjustment of excise duties and mining duties as well as the subsidy system.

5. Reduce environmentally and socially harmful subsidies

Subsidies represent a significant share of the pubic budget expenditures and are indispensable mainly for the upkeep of so-called public properties and utilities. However, part of the subsidies are directed towards activities that endanger human health and the environment, and therefore need to be cancelled and instead, such activities need to be supported that benefit a healthy social development and the environment. Also, a range of direct public expenditures aimed at the securing of social objectives and at rural public transport can be environmentally undesirable and inefficient. This is similar in practically all OECD countries. For example, a rough estimate of the total environmentally undesirable subsidies in the OECD alone represents approximately ***one trillion US dollars per year***, or up to USD 1.950 billion if the hidden subsidies and external costs are included (equalling roughly 3.6 % of the GDP of OECD countries). A number of studies[6] have estimated the harmful subsidies in the OECD countries to amount to USD 500-600 billion at least. Thus, the sum of harmful subsidies in the OECD countries reaches an astronomical 7-14 times the annual GDP of the Czech Republic. As shown in the table below, agriculture, transport and energy industry are the main recipients of the subsidies.

Table 3: Environmentally undesirable subsidies in OECD

Sector, USD bln	Pearce & von-Finkelstein	van Beers & de Moor	Myers & Kent
Agriculture	362	325	325
Transport	107-226	225	558
Energy Ind.	19-24	205	145
Water	2	60	60
Others	n.a.	135	22

[6] Van Beers et de Moors (1999); Myers et Kent (2001); Balmford et al. (2002); OECD (2000); similarly Pearce et von-Finkelstein (2001).

Total	**490-614**	**950**	**1 110**

Source: OECD (2000), p. 36; Pearce et von-Finkelstein (2001)

This study attempts to discuss the subsidies in all the major sectors of economy with negative environmental impacts – agriculture, water management, forestry, industry, energy generation, construction, and transport – and to suggest their reduction, and possibly cancellation or redirection to environmentally desirable activities.

6. Develop human resources

The quality of education, culture, healthcare and research utilities is vitally important for the further development of the society, and should therefore be raised and supported through relevant budget items. Human resources support also includes lower taxation of human labour and skill. Unfortunately, the scope of this study does not allow for a deeper analysis of this issue. We propose to broaden the scope in the future and to accentuate this rule.

7. Prepare for EU membership

With the approving vote in the referendum on EU accession in June 2003, the country is going to enter the EU in mid 2004. However, to approximate to the EU levels, we need to start with long-term activities in such areas as education, healthcare, culture, research, environment, and others, as well as a harmonisation of the domestic law with the European standards. Among the European standards on environmental taxes, the most significant is the proposal for a directive on the taxation of energy products and electricity. The directive will introduce the obligatory minimum rate for excise duties on energy products used in heat generation or as motor fuel, and on electricity. The government has already reacted on this directive, raising the excise duty on hydro carbonated fuels effectively from 2004. The current rates valid in the EU compared to the existing Czech rates are shown in Table 4. An analysis of the implementation of this directive is being made by the Inter-department Working Group on Environmental Tax Reform, and a number of analytical studies have been made (e.g., Scasny 2002a; 2003), therefore no more space is given to it in this proposal.

Table 4: Excise duty rates on energy products

		Act No. 353/2003		
	2003/96/EC	**CZK**	**EUR**	**Difference of EUR rates**
Motor fuels				
Unleaded petrol, per 1000 l	**359**	**11,840**	**371**	**+ 12**
Leaded petrol, per 1000 l	**421**	**13,710**	**430**	**+ 9**
Diesel, per 1000 l	**302**	**9,950**	**312**	**+ 10**
Bio-diesel (69% of diesel tax)	**0-302**	**6,866**	**215**	
LPG per 1000 kg	**125**	**3,933**	**123**	**- 2**
- special uses	**41**	**1,290**	**40**	**- 1**
Kerosene per 1000 l	**302**	**9,950**	**312**	**+ 10**
Compressed gases in GJ	**2,6**	**3,350/t**	**2.3/GJ**	**- 0.41**
- special uses	**0.3**	**387/t**	**0.26/GJ**	**- 0.05**
Heating fuels				
Light heating oil per 1000 l	**21**	**660**	**20.7**	**- 0.3**
Heavy heating oil, 1% sulphur/1000 kg	**15**	**472**	**14.8**	**- 0.2**
Kerosene per 1000 l	**0**	**0**	**0**	**0**
LPG per 1000 kg	**0**	**0**	**0**	**0**
Compressed gases in GJ	**0.30 / 0.15**	**0**	**0**	**- 0.30**
Solid energy products (coal) per GJ	**0.30 / 0.15**	**-**	**-**	**- 0.30**

Electricity per MWh	**1.0 / 0.5**	**-**	**-**	**- 1**

Source: Scasny, 2003

8. Long-term deficit trend and public debt increase

The Czech Republic's State Budget and public budget system have been showing a deficit trend for ten years. This trend was hidden from view in the first years of independence by transferring the deficits from the budget system to non-budgetary transformation institutions. The deficit trend has been overt for the last five years; however, its gravity centred on the high, totally non-productive public account of private economic entities (bankrupt financial institutions, state support of large banks in financial stringency, state guarantees and obligations for private entities, etc.). It is the demonstration of a moral gamble of public finance administrators as well as private individuals related in the past and present to these cases. The demographic developments are also impacting negatively, increasing the volume of transfers while the actively participating population is not growing. This is leading to the necessity of a pension reform with the objective of relieving the tension between the incomes and the expenditures while at the same time changing the concept of the pensions system.

9. Persevering elements of inefficiency and the lack of co-ordination

The tax system and the expenditure programmes are still far away from converging with their efficiency potentials. It is not only the administration and publicly funded institutions that are inefficient: it is also the public spending management itself, especially in the case of duplicate or mutually counteractive programmes and projects. Lack of concept and cross-department co-operation are demonstrated in the public institution management. The potential for the reduction of government failures is not fully used. There is no complex information system allowing for transparent decision-making about public expenditures with minimum cost and in real time. The tax system includes a large number of so-called tax allowances, or preferential tax treatment for selected entities and activities. Numerous tax exemptions, reductions, returns and discounts are sources of tax evasions and lower total net tax revenues. At the same time, they often represent duplicities side by side with identically oriented expenditure programmes, the net effect often not corresponding with the volume of public spending and the tax revenue loss. The simultaneous utilisation of a tax as well as expenditure instrument to reach a government objective requires two separate instances of administration and management, thus needlessly doubling the transaction (administration) costs.

III. The Structure of the Alternative Proposal

III.A The Incomes Side of the Budget

Environmental taxes – Raising the existing ones and introducing new ones

Due to the inclusion of external costs in the prices of energy and energy products, we propose to raise some of the rates of the existing taxes (above all, excise) and to introduce selected new taxes. The external costs are not nearly covered by the minimum energy taxes approved by the European Commission on 27. 10. 2003 (2003/96/EC; EC 2003), and therefore taken as rough guidance only and the staring point for a further increasing of the rates up to the ideal state as described for 2013 (taking into consideration the 2002 EC proposal COM/97/30 "Monti").

Furthermore, the proposals are divided by economy sectors (transport, energy and heat, and raw minerals extraction and imports).

A. Transport

Transport is one of the main factors with negative impacts on the quality of environment, mainly through the air polluting emissions, higher noise levels, land demands, and soil coverage due to the construction or reconstruction of the road and motorway networks, but also through the use of natural raw materials, whose exploitation leads to increased undesirable pressure on environment. Above all, road transport is also connected with traffic accidents resulting in large human and material losses.

The extent of the external costs varies considerably depending on the mode of transport, time and place. The largest external costs relate to accidents and air pollution (50% and 40% respectively of the total external costs; in OECD 2002). The majority of all external costs are caused by road transport, accounting for some 87% of the total costs. Taxes represent an ideal tool to internalise these costs at least partially.

Therefore, we propose the following modifications:

Excise duties

- **Increase the rates on unleaded petrol**

  We propose to increase the rate on unleaded petrol from approx. 344 EUR/1,000 l (or 10.84 CZK per litre[7]) to approx. 400 EUR, or 11.84 CZK in the first phase (year 2004)[8], and to 571 EUR/1,000 l, or 18.0 CZK/l by 2013 (minimum rate set by the approved Directive 2003/96/EC is 360 EUR/1,000 l, or approx. 11.4 CZK/l).

[7] The rate according to the existing act 587/1992 of L.R., which is valid till the end of 2003

[8] Equal to the rate set in the recently approved Excise Duty Act No. 353/2003 of L.R., which is valid since 1.1.2004

Considering the trends in fuel consumption and price elasticity of fuels calculated by Brůha and Šťasný (2003)[9], the total revenue will be approx. 28.5 billion CZK in 2004, and nearly 42.4 billion CZK in 2013 (current prices). That means additional revenue of 2.4 billion CZK, and 16.7 billion CZK respectively.

- **Increase the rates on engine diesel (i.e., medium and heavy gas oils used to run engines)**

We propose to increase this rate from 259 EUR/1,000 l, or 8.15 CZK/litre, to approx. 316 EUR/1,000 l, or 9.95 CZK/l in the first phase (year 2004)[10], and to 571 EUR/1,000 l, or 18.0 CZK/l by 2013 (minimum rate set by the approved Directive 2003/96/EC on diesel is 302 EUR/1.000 l, or approx. 9.6 CZK/l). The trend in the EU is towards a gradual levelling of the rates for petrol and diesel (engine diesel with its emissions is more environmentally damaging than petrol)[11].

Considering the trends in diesel consumption and applying the knowledge of the price elasticity of the demand for this type of fuel, our calculations result in an additional tax revenue of 4.7 billion CZK in 2004, and 25.8 billion CZK in 2013; the total revenue thus being 27.1 billion CZK, and 47.8 billion CZK respectively, in current prices.

- **Cancel the tax refunds on the so-called 'green fuel'**

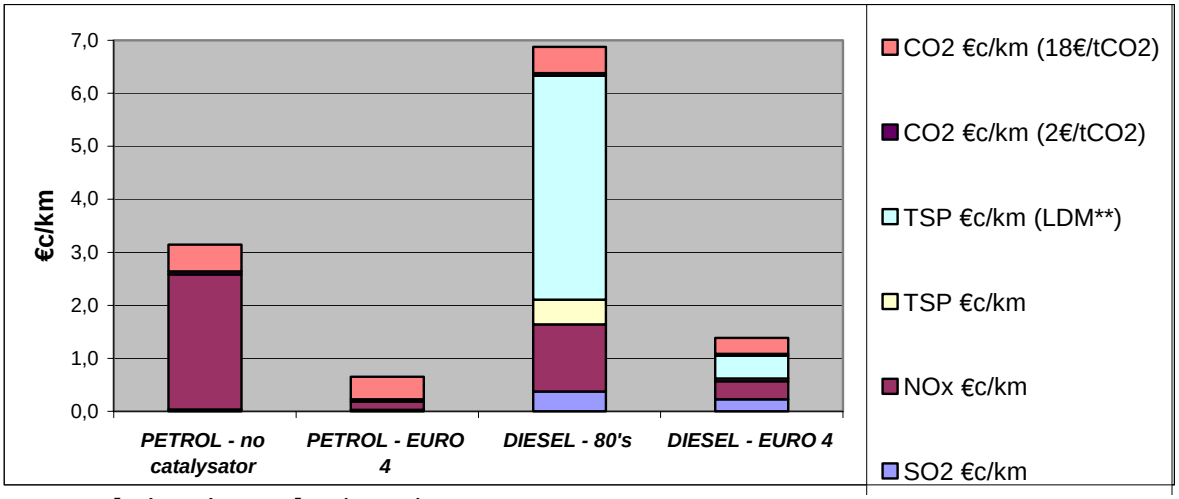
The previous calculation – the increase of engine diesel rates – assumes a cancellation of environmentally harmful subsidies paid to farmers in the form of refunds of 60% of the excise duty on fuels used in primary agricultural production, forest nurseries, and forest renovation; 1.29 billion CZK was refunded in this way in 2001, and 1.30 billion CZK in 2003[12].

Such support for 'green diesel' can be considered environmentally harmful, because it supports the combustion of fossil fuels producing emissions that cause the greenhouse effect, environmental acidification, and health damage. With the present trends – if it is not

[9] -0.504 for households and -0.182 for industry

[10] The same rate as in the new act about excise duties No. 353/2003 L.R., which is valid from January 1, 2004.

[11] Foltýnová et al. 2003 compares, among other things, the external costs of the emissions from petrol and diesel engines, namely for the 1980 standards and the engine parameters in 2001. Calculations using the models of GEMIS and Uniform World Model showed that the diesel engine had far worse impacts mainly in SO_2 and particulate matter emissions, while the petrol engine produces more CO_2 emissions. On the whole, diesel engines have higher external costs related to emissions.



Source: Foltýnová et al. (2003)

[12] Source: Report on the Status of Agriculture for 2002

abolished – the state budget expenditures for this refund can be expected at 1.4 billion CZK in 2004 and 2.4 billion CZK in 2013.

- **Increase the rates on LPG**

  We propose to raise it from the current 89 EUR/t, i.e. 2.850 CZK/t[13], to the minimum rate set by the approved Directive 2003/96/EC, which is 125 EUR/t (3,933 CZK/t) in 2004. By 2013, the rate should grow to 270 EUR/t (i.e., approx. 8,542 CZK/t)[14].

  Considering the trends in diesel consumption and applying the knowledge of the price elasticity of the demand for this type of fuel, our calculations result in a tax revenue of 1.16 billion CZK in 2004 and 3.77 billion CZK in 2013.

- **Tax allowances from excise rate on bio diesel**

  The excise duty rate on bio diesel is 69% of the rate on engine diesel. Due to the lower environmental impacts of bio diesel compared to other fuels regulated by excise duties, we recommend to keep this lower rate.

  Another reason for this reduction is the European Parliament and Council on Biofuels Directive COM (2002) 415, which demands a minimum 2% share of biofuels on the fuel market in 2005, and as much as 5.75% in 2010. The Czech Republic, too, is bound by this obligation, and can be sanctioned if it does not fulfil it.

  The rate in 2004 should thus reach 218 EUR/1,000 l, i.e. approx. 6,870 CZK/1,000 l, with 394 EUR/1,000 l, or approx. 12,410 CZK/1,000 l in 2013.

  Considering the current trends in bio diesel consumption and applying the knowledge of the price elasticity of the demand for this type of fuel, our calculations result in a bio diesel excise duty revenue of 2.8 billion CZK in 2004, and 4.95 billion CZK in 2013. The additional revenue would thus be 0.5 billion CZK and 4.1 billion CZK, respectively.

- **Cancelling the excise duty exemption in aviation**

  According to Article 23, Paragraph 1 of the Excise Duty Act, fuels and lubricants used as fuels in domestic and international commercial aviation and aviation works (referred to as aviation fuels), are exempted from the tax.

  This exemption is an instance of direct preferential treatment to an environmentally harmful mode of transport. Therefore, we propose to tax this commodity from 2004 and to gradually raise the tax to the ideal state of 2013, which should be approximately level with the other type of fuels – engine fuel, i.e. 571 EUR/1,000 l (i.e. 18,000 CZK/1,000 l). We propose to tax this type of fuel gradually with the initial level at 2,050 CZK/1,000 l, i.e. 65 EUR/1,000 l. According to existing international obligations this taxation could be enforced only on the bases of bilateral contracts (with the EU countries), that is why the future revenue is guessed for the year 2013 at the level of CZK 1.5 – 1.8 million.

Legal Framework

The modification concerns the Excise Duty Act – the current Act. No. 587/1992 L.R. will be replaced with Act No. 353/2003 L.R., effective from January 1, 2004. To implement the proposals concerning transport, it would be sufficient to amend the provisions of the law on the rates, allowances and exemptions from the tax on hydro carbonated fuels and lubricants. Even if the taxes of fuels and lubricants used in aviation are under international agreements, taxing this fuel is made possible by the newest Directive 2003/96/EC - on the basis of bilateral arrangements of the EU member states.

[13] The rate of 3.933 CZK/t, or 123 EUR/t is valid from January 1, 2004.
[14] The 2002 Monti proposal .

Other Taxes

- **Extend the scope of the road tax, and cancel some of the exemptions from it**

  We propose an extension of the scope of the tax so that it includes all vehicles (not only those used or designated for business) that are registered within the Czech Republic or without, if they are used within the borders of the Czech Republic. Further, we propose cancelling the exemptions from this tax for single-track vehicles, and three- and four-wheeled vehicles constructed as motorcycles and equipped with an engine unit, which have a negative environmental impact.

  This will create equal conditions for all vehicles. However, no significant influence on the state budget can be expected.

Legal Framework

The modification concerns Road Tax Act No. 16/1993 L.R., in its current wording. The change will require a modification of Article 2, laying out the object of the tax, and Article 3, regulating the tax exemptions. It would be worth considering to have non-business individuals pay the tax annually rather than in advances as the case is now.

- **Introduce electronic road toll and cancel motorway vignettes simultaneously**

  The possibility to introduce electronic road toll for freight vehicles is currently under preparation for the medium term (approx. 2 years). However, it would be necessary to extend this toll collection to personal transport as well in order to cover the costs of transport infrastructure.

  While the income from motorway vignettes is 1.8 billion CZK at the present (2002), this sum could grow up to six times after the introduction of the electronic road toll for freight vehicles (according to estimates of Czech Ministry of Transport).

  Besides, a gradual introduction of road pricing is promoted by the European Commission, which in April 2003 issued the proposal for a directive on the mutual compatibility of the individual national systems of electronic road pricing. This directive proposal rules that a universal European road pricing system be introduced in 2005 for all vehicles over 3.5 tonnes or vehicles carrying 10 persons or more. From 2010, this universal fee system will be extended to personal cars and other types of vehicles.

- **Introduce electronic insurance for liability insurance and other motivation instruments in transport**

  Insurance is the most frequently cited economic instrument for the internalisation of the costs of accidents. According to the EC Green Paper on Fair Prices in Transport the insurance system should ensure that the insurance obligation covers the full costs of accidents and that bonuses be differentiated as much as possible by adjusting the insurance costs to the risk. Drivers' responsible behaviour should be rewarded, and a scale of fees introduced, on the other hand, for violations, ideally through a driving licence scoring system.

  The individual users would thus receive direct financial incentives and they would themselves decide about reducing the risk of accident in a way they consider appropriate (changing the mode of transport, safer driving, etc.).

B. Energy and Heat

The production of electricity and heat causes impacts that contribute substantially to damages on human health, flora and fauna, ecosystems and materials. These impacts are external in their majority, and thus not included in the prices of energy media and other products. Tax instruments are fully suitable for their internalisation.

Therefore, we propose the following modifications:

Excise Duties

- **Increase the tax on light heating oils (LHO)**

  We recommend maintaining an equal level of taxation for the LHO and the so-called engine diesel (i.e., medium and heavy gas oils used to run engines), in line with the new Excise Duty Act from October 2003. Since 1.1.2004 the rate increases to 9,950 CZK/1,000 l; if LHO is used for heat generation, the amount of 9,200 CZK/1,000 l is refunded – i.e. the rate is laid out at 660 CZK/1,000 l (i.e. 20.7 EUR/1,000 l). The additional revenues should reach then CZK 635 million. This rate is a little bit below the minimal level according to the Directive 2003/96/EC, which settles 20.7 EUR/1,000 l (CZK 666).

  To meet the ideal state in 2013, the rate should reach approximately 556 EUR/1,000 l, or 18,000 CZK/1,000 l[15], while the tax refund if used for heat production is recommended at 16,976 CZK/1,000 l (i.e. maintaining the tax at 1,024 CZK/1,000 l[16], i.e. approx. 32.5 EUR/1,000 l). The revenue from this tax would therefore be approx. 1.36 billion CZK.

- **Introduce a tax rate for heavy heating oils (HHO)**

  We propose introducing a rate for HHO of 472 CZK/t in 2004[17] (minimum rate under the approved Directive 2003/96/EC is 15 EUR/t, i.e. 472.5 CZK/t). The total revenue will thus be 361 million CZK.

  In the final year 2013, the HHO rate should increase to approx. 35.3 EUR/t, i.e. 1,113 CZK/t (minimum rate under the Monti proposal is 28 EUR/t). Additional income can thus be expected of 884 million CZK.

- **Introduce a tax rate for natural gas**

  We propose introducing a tax rate for natural gas in the form of an excise duty. The initial tax will be 2.63 CZK/GJ (in accordance with the Ministry of Environment Scenario for a Revision of the State Energy Plan for the Czech Republic). The revenue from this tax would constitute little over 781 million CZK. The tax rate would be gradually increased to 27.9 CZK/GJ by 2013, representing a tax revenue of 8.2 billion CZK.

Legal Framework

The modification concerns the Excise Duty Act – the current Act. No. 587/1992 L.R. will be replaced with Act No. 353/2003 L.R., effective from January 1, 2004. To implement the proposals concerning energy, an amendment would be necessary of the provisions of the law on the rates and tax refunds. Simultaneously, we propose amending the Law No. 243/2000 L.R. on Budget Definition on Certain Tax Revenues so that only the revenues from the tax on hydro carbonated fuels and lubricants used as fuels are channelled into the state budget from then on.

[15] Equalling the rate for engine diesel
[16] I.e., approx. 5.6% of the sum for engine diesel
[17] The same rate as in the new act No. 353/2003 L.R. about excise duties, which is valid since 1.1.2004

Taxes on Solid Fuels

Within the framework of the reform we suppose to implement taxes on coal and coke. The tax rates correspond with the Ministry of Environment Scenario for a Revision of the State Energy Plan for the Czech Republic dated October 2003.

- **Introduce a tax rate on lignite**

  We propose taxing lignite (brown coal), namely by 0.83 CZK/GJ. We count on increasing this rate up to 6.7 CZK/GJ. The revenue from the lignite tax will reach 543 million CZK in 2004 and 4.3 billion CZK in 2013.

- **Introduce a tax rate on hard coal**

  We propose taxing hard coal for energy production and for coke production. The initial rates of this tax should be 1.30 CZK/GJ for energy coal and 1.70 for coke coal. We expect these rates to increase up to 10.50 CZK/GJ and 13.70 CZK/GJ, respectively. The revenue from the hard coal tax will reach 200 million CZK (energy coal) and 220 million CZK (coke coal) in 2004, and 1.6 billion CZK (energy coal) and 1.7 billion CZK (coke coal) in 2013.

- **Introduce a tax rate on coke**

  The coke taxation should raise gradually from 2.60 CZK/GJ in 2004 to 21.00 CZK/GJ in 2013. The revenue from the coke tax will thus reach 228 million CZK in 2004, and 1.8 billion CZK in 2013.

Legal Framework

Considering the fact that solid fuels and gas are currently only subject to the value added tax, at least two different approaches can be assumed.

One of the options would be to regulate the taxation of solid fuels under excise duties, using a mechanism similar to the taxation of hydro carbonated fuels and lubricants.

The other option is to regulate the tax with a separate law, which would be justified by the large number of exceptions and special provisions. In that case, the tax could be defined as an environmental protection tax in accordance with the Tax System Act No. 212/1992 L.R.

Other Taxes

- **Introduce a tax on electrical energy**

  Electricity should be taxed on the output (this taxation so far non-existent), starting on the minimum level of approx. 1 EUR/MWh, or 0.03 CZK/kWh (the minimum rate under Directive 2003/96/EC, which sets the minimum rate for industry at 0.5 EUR/MWh), and rising gradually to 13.65 EUR/MWh, or 0.44 CZK/kWh in 2013. Thus, the revenue would be 1.6 billion CZK at the time of its introduction (0.03 CZK/kWh) in 2004, and 26.3 billion CZK in 2013 (0.44 CZK/kWh).

Legal Framework

Since electricity is currently only subject to the value added tax, at least two different approaches can be assumed. One of the options would be to regulate electricity taxing under excise duties. Considering that the distribution companies would be the taxpayers, a mechanism similar to the taxation of hydro carbonated fuels and lubricants could be used.

The other option is to regulate the tax with a separate law, which would be justified by the large number of exceptions and special provisions. In this case, the tax could be defined as an environmental protection tax in accordance with the Tax System Act No. 212/1992 L.R.

➢ **Transferring the heat tax from the reduced VAT rate to the usual rate**

We propose to transfer heat, as well as other energy-demanding products, to the basic value added tax rate. The additional revenue will thus be 3.1 billion CZK in 2004 and 3.9 billion CZK in 2013.

C. Raw Minerals Extraction and Imports

Mining for raw materials entails a large number of negative environmental impacts on the immediate surroundings as well as larger regions. Many of these costs are external, principally the following:

- land claims connected to the damage or destruction of valuable natural sites (biotopes, habitats of protected or endangered species, geological and geomorphologic phenomena, or human archaeology excavation sites),
- shrinking of farmland or forest areas,
- interference with the landscape character,
- increased dust and noise levels from the crushing and transport of the materials,
- tremors from the mining detonations,
- affecting the hydrological regime (water table decrease, water losses from wells), or
- burdening and damaging of the local road network by automobile transport.

These negative impacts can be limited, mining eliminated in extremely valuable areas, and mining limits set by standards and land use planning, nonetheless economic instruments can substantially strengthen these non-economic ones and become the main tools to regulate mining. In fact, they lead to a far better resource economy and force investors to better evaluate the cost-benefit ratios of their projects.

Therefore, we propose the following regulations:

➢ **A tax on the extraction and imports of raw minerals**

We propose a transformation and unification of several items:

- extend the list of items and increase the rates for the **payments for the reserved minerals extracted** (which is 0.5-10% of the market price of the extracted minerals; the revenue from this fee reached 464 million CZK in 2002, and identical funds can be expected in 2003 and 2004), and
- for the **payment for the extraction space** (currently 10,000 CZK/sq km for every started sq km of the extraction space when marked on the surface; the payment is 2,000 CZK for small extraction spaces of up to 2 hectares; the revenue was 24 million CZK in 2002, and identical revenues are estimated for 2003 and 2004);

According to materials of Hnuti DUHA - Friends of the Earth the Czech Republic – (Kropacek; in: Scasny 2002b) the fee for construction materials and limestone was proposed as follows: at least 100,000 CZK per hectare of the extraction space within a reserved deposit, plus a fee of 40 CZK per tonne of raw material extracted. The study proposes doubling the payment rate inside protected landscape areas, nature parks and where the extraction space overlaps with an element of the environmental stability area system. The total rate should be reduced by 20% for deep mining. The revenue generated by this modification is estimated at approx. 3-3.5 billion CZK annually, bringing an addition of 2.5-3 billion CZK to the present-day revenue. What should be discussed is transferring of all these fees to one local tax.

Legal Framework

The proposed modification will require the introduction of a new tax title with the character of an environmental protection tax.

Summary of the Taxes:

The estimations of the proposed changes of the rates and structure of the taxes related to environment, show that the additional tax revenues of the State Budget could reach almost 19 billion CZK in 2004, and approximately 109 billion CZK in the target 'ideal' year 2013 (in current prices).

The total revenue from the taxes and fees related to environment were 64 billion CZK in 2002, and are estimated at over 65 billion CZK (all estimates by Czech Ministry of Finance). In 2004, the total revenues from environmental taxes and fees could be 85 billion CZK, reaching approximately 195 billion CZK in current prices in 2013 (including the VAT from the increased excise duties).

That would represent an increase in the share of environmental taxes and fees from the expected 2.8% of the GDP in 2003, to 3.3% proposed for the same year, and 4.2% in 2013. The share of these taxes and fees on the total tax revenues would increase from the current 6.9% to 7.8% in 2004, and the target 10.6% in 2013.

The per capita environmental tax burden would increase from the expected 6,260 CZK per capita in 2004 to the proposed 8,000 CZK in 2004, and 19,000 CZK in 2013 (all figures in the current prices of the respective years).

The following tables show an overview of the proposed changes and the total revenue from the increased and newly implemented environmental taxes to the public budgets.

Table 5: Proposed change of the volume and structure of environmental taxes (public budgets total, billions CZK); year 2004

On	Units	2004 rate - proposal	2004 add. revenue	2004 total revenue
petrol	CZK/ 1000 l	11,840	2,357	28,479
Diesel (including aviation fuels)	CZK/ 1000 l	9,950	4,737	27,083
LPG	CZK / t	3,933	1,162	1,162
biodiesel	CZK/ 1000 l	6,870	495	4,087
LHO	CZK/ 1000 l	660	635	635
HHO	CZK / t	472	361	361
lignite	CZK / GJ	0.83	543	543
energy hard coal	CZK / GJ	1.30	200	200
coke hard coal	CZK / GJ	1.70	220	220
coke	CZK / GJ	2.60	228	228
natural gas	CZK / GJ	2.63	781	781
electricity	CZK / kWh	0.03	1,567	1,567
heat (basic VAT rate)	%	22	3,093	3,946
VAT (increased excise taxes)			3,959	34,480
raw minerals extraction and imports	100.000 CZK /ha; 40 CZK/t	100,000 40	- 3,000	- 3,000
Total			**17,447**	**98,764**

Table 6: Proposed change of the volume and structure of environmental taxes (public budgets total, billions CZK); year 2013

On	Units	2013 rate	2013 additional revenue	2013 total revenue
petrol	CZK / 1000 l	18,000	16,747	42,361
Diesel (including aviation fuels)	CZK / 1000 l	18,000	25,842	47,754
LPG	CZK / t	8,542	3,767	3,767
biodiesel	CZK / 1000 l	12,410	4,087	4,952
LHO	CZK / 1000 l	1,024	1,358	1,358
HHO	CZK / t	1,113	884	884
lignite	CZK / GJ	6.7	4,278	4,278
energy hard coal	CZK / GJ	10.5	1,572	1,572
coke hard coal	CZK / GJ	13.7	1,737	1,737
coke	CZK / GJ	31	1,793	1,793
natural gas	CZK / GJ	27.9	8,231	8,231
electricity	CZK / kWh	0.11	26,346	26,346
heat (basic VAT rate)	%	22	3,946	3,946
VAT (increased excise taxes)		22 %	12,319	48,530
raw minerals extraction and imports	100.000 CZK /ha; 40 CZK/t	100,000 40	3,000	3,000
Total			**109,272**	**193,874**

Reducing labour costs

We propose to utilise the additional revenues from the environmental taxes to reduce the cost of labour, namely by reducing the expenditures on social security and the income tax. A 'double dividend' will thus be gained – more efficient environment protection and higher employment.

A similar approach has already been applied with the implementation of the ETR in Germany[18], where the insurance rates reach 19.1%. The following table shows the present insurance rates as valid since 1996.

Table 7: Percentage rates of insurance valid in the Czech Republic

[18] Germany, which introduced an ETR in 1999-2003, recycled the additional tax income in the form of reducing the retirement security duty to 19.1% in 2003 (without the ETR, the duty would increase to 20.6% already in 2002), as shown in the following table:

Year	Income extent	Reduction of insurance compared to 1998
1999	4.3 billion EUR	0.6 %
2000	8.8 billion EUR	1.0 %
2001	11.5 billion EUR	1.3 %
2002	14.3 billion EUR	1.5 %
2003	16.9 billion EUR	1.7 %

Source: German Federal Ministry of Environment

	Retirement security	Health insurance	State employment policy	Total
Employers and small employers	19.5	3.3	3.2	26
Employees	6.5	1.1	0.4	8
Self-employed persons	26	voluntary 4.4	3.6	29.6 or 34, respectively

Source: Ministry of Labour and Social Affairs

We propose the following modifications to the income taxes and social security:

- ***In 2004,*** reduce the social security by 17.9 billion CZK. This represents a reduction in the insurance revenue by about **6%**, expressed in a reduction of the insurance rate by **3%** (total for employee and employer), from 34% to 31%.
- ***In the following years, reduce the social security at a rate identical to the growth rate of the total environmental tax and fee burden. Therefore, for instance in 2013,*** we propose to lower the insurance rates to 23%.

Table 8: Proposed reduction of the tax burden of labour (billions CZK, current prices)

Item	Revenue increment compared to the situation without any reforms	Revenue increment in 2013 compared to the situation without any reforms
Total increase	**17**	**110**
Prediction of revenues of social security payments; "without the reform"	292 bln. CZK	490 bln. CZK
Prediction of revenues of social security payments (70 % from the total social security)	200 bln. CZK	340 bln. CZK
Decreasing of the total social security revenues "after the reform"	-5.8 %	-22.4 %
Decreasing of social security contributions	-8.5 %	-32.4 %
Decreasing of the social security rates (from the existing level of 34 %)	31.1 %	23 %

III.B The Expenditures Side of the Budget

Cancellation or Reduction of Environmentally Harmful Subsidies

A considerable part of the subsidies from the State Budget result in negative impacts on the environment. This part of the study looks at the most significant environmentally harmful subsidies paid from the State Budget (or, as the case may be, non-budgetary funds). Their

share on the State Budget expenditures is summarised in the conclusions and suggestions for changes are made.

Table 9 shows the expenditure titles, which should be evaluated with consideration of their impact on the environment.

Table 9: The expenditures side of the State Budget 2003 and 2004 (bln. CZK)

Budget composition	**Indicator**	**2003**	**2004**
102	Regulation of agricultural production, market organization and providing subsidies	4,730	4,730
103	Subsidies – forestry	950	446
Division 10	**Agriculture and forestry**	**18,078**	**27,818**
211	Extraction and energy production	3,625	2,045
214	National business, services and tourist business	189	371
Division 21	**Industry, building industry and services**	**9,498**	**9,186**
221	Communication over land	3,053	9,823
222	Road traffic	542	483
223	Inland navigation	9	188
224	Rail transport	9,185	11,548
225	Civil aviation	73	22
Division 22	**Transportation**	**15,189**	**27,014**
251	Programs of business supporting	1,761	1,306
Division 25	**General economic businesses**	**11,039**	**11,266**
363	Local services and local development	363	137
Division 36	**Housing, local services and local development**	**17,919**	**21,856**
371	Protection of air and climate	7	7
372	Waste disposal	214	331
373	Protection and rehabilitation of soil and groundwater	282	355
374	Protection of nature and landscape	1,169	2,234
375	Restriction of noise and vibrations	0	0
376	Administration in the Environmental protection	1,357	780
377	Protection against radiation	71	76
378	Research in the area of the environment	419	418
379	Other activities in the environment	253	794
Division 37	**Environmental protection**	**3,770**	**4,998**

The suggested changes in the system of subsidies are divided by branches of the economy – agriculture, water management, forestry, industry, regional development and transport. Let us now take a closer look at the individual resorts.

Agriculture

General commentary

A considerable part of the subsidies in agriculture are aimed, above all, at market stabilisation, farming support in disadvantaged conditions (with the objective to reduce the risk of land desertion), investment support and general services (such as research and education, etc.). Another part of the funds is aimed at environmental targets (ecological farming, genetic resource and diversity preservation, grassland maintenance). These subsidies are mostly paid from the budget brackets of the Ministry of Agriculture (MoA), the State Agriculture Intervention Fund (SZIF), and the Farming and Forestry Support and Guarantee Fund (PGRLF).

Ministry of Agriculture

From its budget bracket, MoA provides direct funds and subsidies for agriculture, forestry and water management. These transfers are carried out according to government by-laws and within the confines of annually announced subsidy titles. Furthermore, this chapter covers the costs for apprentice education, service activity contributions for central bodies, research grants through the National Agricultural Research Agency, and so forth. The expenditures structure of MoA in 2000-2002 is shown in Table 10.

Table 10: Important subsidies from MoA, including budgetary provisions

Programme or subsidy title	**Funds given (CZK millions)**		
	2000	**2001**	**2002**
Total for support subsidy programmes under the MoA Guidelines	3,732	2,531	2,374
Total for funds ruled by government by-laws (nos. 344/1999 L.R. and 505/2000 L.R.)	3,679	2,868	2,858
Funds ruled by government by-law no. 359/2000 L.R. (beef cattle, sheep)	219	0	
Funds ruled by government by-law 420/2000 L.R. (draught)	850	4,139	0
Budgetary provision for support of re-forestation	0	30	25
Expenditures into research and science	441	475	527
Expenditures into apprentice education	1,676	1,197	0
National Genetic Potential Conservation Programme	21	22	
Other expenditures from MoA budget	232	288	290
Total expenditures from MoA budget into agriculture	**10,850**	**11,638**	**12,924**
Subsidies – forestry	501	465	499
Subsidies – water management	485	600	932
State Budget subsidies for PGRLF	2,175	1,309	1,300
State Budget subsidies for SZIF	2,478	4,230	2,930
Expenditures of other institutions in the MoA resort	356	323	
Total expenditures of the MoA resort	**15,859**	**17,500**	**15,293**
Tax allowances in the MoA resort, within that	**2,367**	**2,271**	**2,931**
Excise duty returned to farmers for 'green diesel'	954	1,287	1,294
Tax allowance for biodiesel – VAT	958	624	835
Tax allowance for biodiesel – excise duty	315	206	637
Tax allowances for small independent breweries	140	154	165

Source: MoA

The subsidies ruled by government by-laws and under the MoA Guidelines can be considered mostly environmentally positive funding, or such that has minimum risk of environmental impacts.

On the other hand, the funding for 'green diesel' can be considered environmentally harmful, since it supports the burning of a fossil fuel. Also, the subsidies for SZIF and PGRLF, as well as forestry and water management, are environmentally harmful (see below).

State Agricultural Intervention Fund (SZIF)

Created by the Law No. 256/2000 L.R., its incomes are mainly constituted by the subsidies from the State Budget for market regulation, incomes from its own activities, and bank credits.

In accordance with the law and the international agreements binding for the Czech Republic, and based on the government by-laws issued to implement laws, the fund applies measures to stabilise the agricultural produce and food markets with the objective to minimise price swings on the domestic market.

The subsidies paid to SZIF constitute a considerable part of the Fund's expenditures (see Table 11). Their volume and character considered, these expenditures have a potential to impact on the environment negatively. Subsidies and compensations for the agricultural production lead to overproduction of some commodities whose marketability would otherwise be quite limited. Therefore, we are speaking about support of primary agriculture production impacting negatively on the environment.

Table 11: State Agricultural Intervention Fund expenditures a incomes (CZK millions)

Year	***2000***	***2001***	***2002***
Expenditures into market management through SZIF			
Subsidies from State Budget	2,420	4,230	2,930
Transferred from other chapters of State Budget	58	0	0
Sales of purchased products	1,919	354	793
Total incomes	**5,101**	**6,103**	**8,972**
SZIF sources for market management			
Subsidised exports	859	1,411	2,492
within that:			
Dairy products	823	967	2,035
beef cattle	0	438	352
pigs for meat	3	0	0
potato starch	33	6	23
Intervention purchases – food wheat	538	62	2,804
Compensations	0	2,565	1,974
within that:			
milk quotas	0	76	85
school milk consumption	0	19	62
starch production	0	14	56
soil pacification	0	1,709	1,771
rape seed purchases for biodiesel	0	747	0
Total expenditures	**3,986**	**4,038**	**8,549**

Source: MoA

What can be considered environmentally positive subsidies is the funding of soil pacification under the government by-law No. 86/2001 L.R., laying out the conditions for funding and compensation for soil pacification. Under this programme, CZK 747 million was granted in 2002. However, the subsidies for other, non-pacified, arable land, worth CZK 200-600 per hectare, are already considered environmentally harmful.

Farming and Forestry Support and Guarantee Fund

The PGRLF was established by the MoA in accordance with the government by-law no. 337 dated 23/06/1993, as a public institution to support credits given by commercial banks to primary forestry and farm producers by means of credit security guarantees and subsidising the credit interests. Part of the Fund's finance has been dedicated to the support of export of selected commodities since 1997 (as subsidies for export organisations' credit interests). Since 1998, the sources of PGRLF's income have also been orientated at subsidising the restoration of agriculture in areas that had been flooded.

PGRLF grants funds under purpose-oriented programmes. The programmes FARMER (investment credit support) and OPERATION (operational credit support) are the most significant in the long term. Both these programmes can have potentially negative environmental impacts, as they support primary agricultural production and the marketing of possible commodity overproduction.

Recommendations:

- *To cancel the support of primary agricultural production through the return of a part of excise duty (the so-called 'green diesel').*

Justification:

The support is aimed at medium and heavy engine drive gas oils (engine diesel) and their blends with rapeseed methyl esters for diesel engines (biodiesel), which entail greenhouse gas emissions, environmental acidification, and damages to health. Thus, the support for 'green diesel' tenaciously supports the often-inefficient combustion of fossil fuels.

- ***To reduce the interventions by SZIF***

Justification:

Paid in too large a volume, the subsidies support overproduction of certain agricultural commodities whose production often represents a heavy environmental burden.

- ***To analyse individual subsidies by PGRLF with regards to their environmental impacts***

Justification:

PGRLF can support overproduction of certain agricultural commodities. Above all, the following subsidies should be reconsidered: cattle breeding without commercial dairy production, sheep and goat breeding, fishpond de-sedimentation, land use change procedures, and water management alteration procedures.

Water Management

Most subsidies from public sources to water management are granted from the State Budget and the State Environment Fund (SFZP). These subsidies are targeted at the construction of water mains, sewage, and wastewater treatment plants, and furthermore at nature and landscape protection, including anti-flood measures (see Table 12). With most of them, however, their negative environmental impacts cannot be determined unambiguously, and therefore it is recommended at this stage to analyse them in depth.

Table 12: Financial claims of Water Management from the State Budget (CZK millions)

Programme or policy	2002	2003	2004
Construction and technical renovation of water mains and drinking water plants	250	210	200
Construction and technical renovation of waste water treatment plants and sewage systems	102	70	100
State aid to restore areas flooded in 2002	65	590	590
Flood prevention – capital costs	100	150	150
Watercourse maintenance – running costs	105	130	150
Flood damage remediation of state-owned water facilities	80	1,495	1,613
Restoration, de-sedimentation, and reconstruction of fishponds and dam lakes		500	800
Fishpond de-sedimentation	184	300	
Restoration of soil reclamation structures		30	30
Flood damage restoration	740	510	
Total	**1,626**	**3,985**	**3,633**

Source: Medium-term Social and Economic Development Strategy, p. 134

Recommendation:

- ***For each subsidy, to consider its impacts on the landscape.***

Justification:

Especially concerned are the programmes 'Construction and technical renovation of water mains and drinking water plants' (questions of waste water liquidation to be resolved), 'Construction and technical renovation of waste water treatment plants and sewage systems' and 'Small-scale environmental activities in water management' (ensure that, immediately after construction, waste water is transferred into a treatment plant meeting the legislative standards), 'Anti-flood measures', 'Combating the damage caused by the 1997 flood', and 'Combating the damage caused by the 1998 flood' (to minimise the impacts on the outflow ratio changes in certain stretches of the watercourses regulated).

Forestry

Forestry subsidies are paid from the MoA budget chapter. They consist of non-investment as well as investment subsidies for forest management, covering the state financial duties laid out by the Forestry Act (mostly for torrent reclamation and barrages, the activity of expert foresters and the preparation of forest management outlines). Other funds are aimed at nature

friendly forestry measures, mainly in the national park and protected landscape area forestry. The environmental impacts of most of these subsidies, as well as those in the water management sector, cannot be determined without ambiguity, and therefore identical conclusions apply – to scrutinise these subsidies in detail. The expenditures on forestry are shown in Table 13.

Table 13: Financial claims of Forestry from the State Budget (CZK millions)

Programme or policy	2002	2003	2004
	Expected figures	Budgeted	Claims
Forestry policy total	**780**	**690**	**2,220**
Running costs	560	480	1,420
Capital costs	220	210	800

Source: Medium-term Social and Economic Development Strategy, p. 140

Recommendation:

- ***For each subsidy, to consider its impacts on the landscape.***

Justification:

Especially concerned are the programmes of torrent barrage and technical reclamation, restoration of forests damaged by pollution, airplane-operated lime spraying, and large-scale forest protection interventions.

Transport

Funds for the transport sector are mostly paid from the State Budget (chapter 327, of the Ministry of Transport – MoT), and the State Transport Infrastructure Fund (SFDI). The following table shows the individual subsidies from the MoT chapter.

Table 14: Subsidies from the MoT budget chapter

Subsidy type – a selection	**Volume of subsidy (CZK millions)**			
	2000	**2001**	**2002**	**2003**
Subsidies for combined transport	288	91	97	91
Prague underground construction support	370	913	550	485
Settlement of justified losses from public passenger railway transport	3,000	500	1,813	4,717
Czech Railways Co. credit security instalments	800	800	185	0
Construction and restoration of local roads	1,097	34	42	100
Construction and technical restoration of urban public transport structures	536	10	7	0
Support of urban public transport fleet purchase and maintenance	0	150	200	237
Support of rural bus fleet purchase and maintenance	150	363	200	238
Expenditures of MoT chapter – Total subsidies	**27,295**	**3,596**	**4,257**	**5,570**

Source: MoT

These MoT subsidies have an altogether positive environmental impact, but they are not sufficient in volume, especially in the case of combined transport.

Those subsidies with potentially negative environmental impacts are mostly paid from the SFDI, where they are aimed at the development, maintenance and construction of transport infrastructure – roads and motorways, railways and domestic waterways. The SFDI's incomes mainly consist of tax revenues (road tax and 20% of the gross revenue from the excise on hydrocarbonated fuels and lubricants) and subsidies from the National Property Fund (FNM). Since 2003, the maintenance and repairs of railway infrastructure have been financed by the Railway Administration Co., whose principal incomes are based on the fees for the use of railways paid by railway operators, on SFDI payments, etc. The part of SFDI's income so far brought by the FNM remains unresolved from the 2004 budget. Besides these incomes, funds are used under the pre-accession instrument of the EU, ISPA, whose volume for 2002 was approximately EUR 190 million (equalling roughly CZK 5.7 billion).

Table 15: SFDI expenditures on transport infrastructure maintenance and construction

Subsidy type	**2001**	**2002**	**2003**
Motorway maintenance	853	1,136	
Motorway investments	3,696	-	-
Road maintenance	7,590	8,922	10,661
Road investments	7,085	14,187[19]	17,304[20]
Track and path maintenance	0.055		
Other infrastructure investments (cycling paths)	12	30	60
Waterways investments	405	845	804
Railway maintenance	5,101	5,140	5,480
Railway investments	6,264	10,820	10,900
Traffic safety increase programmes			95
Total SFDI expenditures	**36,202**	**41,300**	**45,400**

Source: MoT

The following tax allowances are granted in the transport sector:

1. Reduced road tax rates for vehicles meeting the EURO 3 emission limits
2. Reduced road tax for vehicles used for combined transport
3. Value added tax returns for cars purchased domestically by handicapped individuals
4. Value added tax returns or reductions for other payers
5. Road tax exemptions
6. Excise duty exemptions on carbon based fuels and lubricants
7. Road tax rate reduction for vehicles used in vegetable farming

Tax allowances 1 and 2 impact on the environment positively. Tax allowances 6 to 8 have palpable negative environmental impacts, preferring the use of classical fossil fuels. This concerns, above all, the excise duty exemption on fuels and lubricants used in domestic and international commercial air transport and air works, as well as the tax return claims for primary agricultural producers and for the armed forces.

Recommendations:

- ***To cancel the following tax allowances: excise duty exemptions on carbon based fuels and lubricants, and road tax rate reduction for vehicles used in vegetable farming.***

[19] Including investment in motorways
[20] Including investment in motorways

Justification:

The tax allowances make preference of air and road transport regardless of the negative environmental impacts, thus distorting the prices of transport. It is an important contribution to negative external costs.

- ***To change the ratio of expenditures in the individual chapters of SFDI between road and railway transport. To reconsider the capital expenditures from SFDI in the light of their environmental impacts.***

Justification:

At the present, capital expenditures – i.e., subsidies for the construction and modernisation of transport infrastructure as well as debt service – are divided between roads (including cycling paths) and railways so that over one half of the total capital expenditures are directed towards roads (in which the subsidies for the construction and modernisation of cycling paths are negligible, being 0.21% for this year), and about one third goes towards railways. Thus, the ratio of capital expenditures (in 2003) for railway to road transport is approx. 38:60, i.e. 1:1.58 to the detriment of railway transport. More is shown in Table 16.

Table 16: SFDI capital expenditures on transport infrastructure (CZK millions, current prices)

	2001	*%*	**2002***	*%*	**2003***	*%*
Total capital expenditures	17,239	*100.00*	**25,862**	*100.00*	**28,928**	*100.00*
within that, roads	*7,965*	*46.20*	***14,187***	*54.86*	***17,304***	*59.82*
Railways	5,492	*31.86*	**10,820**	*41.84*	**10,820**	*37.40*

*Source: SFDI (2002); Note: * budgeted.*

Again, the running expenditures from the SFDI, i.e. the funds for transport infrastructure repairs and maintenance, are targeted primarily at roads (over 60% of the total expenditures), only about one third of the total running SFDI expenditures go towards railways.

The costs needed to repair and maintain the neglected road infrastructure into a standard-meeting shape (investments excluded) are estimated to amount to CZK 200 billion. Railway under-maintenance is estimated at an identical sum, resulting in a one-to-one ratio. However, the ratio of running SFDI expenditures towards railways:roads in 2003 was 34:65, i.e. 1:1.9.

Absolute figures are shown in the following table.

Table 17: Running expenditures on transport from the SFDI (CZK millions, current prices)

	2001	*%*	**2002***	*%*	**2003***	*%*
Total running expenditures	**13,358**	*100.00*	**15,438**	*100.00*	**16,141**	*100.00*
within that, roads	**8,427**	*63.09*	**10,058**	*65.15*	**10,420**	*64.56*
Railways	**4,848**	*36.29*	**5,140**	*33.30*	**5,480**	*33.95*

*Source: SFDI (2002); Note: * budgeted.*

- ***To increase the support of combined transport***

Justification:

Combined transport is more environmentally friendly, thanks to a dominant share of railway transport. European Union also issues aid to combined transport, following up on the

already ended PACT I and PACT II programmes with the new Marco Polo. What is more, the resolution CEMT / CM (2002) 3 / FINAL, approved by the Council of Ministers in Bucharest on May 29-30, 2002, calls for support of combined transport.

- ***To support environmentally friendly fuels through a reduced excise duty***

Justification:

The excise duty allowance system should be changed to reflect the environmental performances of transport modes. Thus, e.g., the excise duty on LLG should be reduced to the level of excise on LPG, which currently equals zero. Heat content considered, the excise on LLG is nearly three times as high as that on LPG, thus practically rendering an advancement of this technology impossible (adapted from CityPlan, 2002).

- ***To support urban public transport***

Justification:

Public transport in towns and cities represents an alternative to the unsustainably growing automobile transport. The support must be aimed at improving the offer of public transport of high quality and sufficient capacity in towns and cities, and at reducing the emissions from buses (a move from EURO II buses to EURO III). Moreover, such support is in accordance with the National Plan for Equalling the Opportunities for Handicapped Citizens, approved by the government resolution no. 256 of 1998, by means of preferring low-floor vehicles.

Industry

Subsidy programmes are run from the State Budget under the Industrial Policy of the Czech Republic, nation-wide, aimed at business from all the country, as well as limited to businesses from the so-called structurally weak regions. The objective of the majority of these programmes is to create such economy in the Czech Republic that would be able to cope with the pressures of the European Union's competitive environment.

The nation-wide programmes include several of the small and medium-sized enterprises support programmes run through CMZRB, industrial zones support programmes, the investment incentives programme, the industrial research and development programme, and the technology parks support programme. The budget chapter of the Ministry of Industry and Trade (MIT) had 75.7% of its total 2002 expenditures spent on these development programme subsidies, equalling the sum of CZK 7.3 billion (Table 18).

Negative environmental impacts can be expected with some of the subsidies under the industrial zones investment and small and medium-sized enterprises support programmes.

Table 18: Selected MIT chapter subsidies – actual payments (CZK millions; 2002)

Type of subsidy	Subsidy volume
Sector operational programme 'Industry'	78.0
Research and development support	1,082.8
Mining industry phase-out	3,643.7
Industrial zones investment	1,277.0
Small and medium-sized enterprises support	977.8
Energy savings and renewable resources programme	77.6
Total expenditures from MIT chapter	**7,311.8**

Source: MIT

Recommendations:

- ***To consider the environmental impacts of investment incentives – industrial zones investment***

Justification:

A lot of investment is made regardless of its impacts on the landscape and other components of the environment. The development – i.e., increase – in the industrial zones investment expenditures from 1999 (when this type of support was started) is shown in Table 17.

Table 19: Industrial zones – MIT chapter of State Budget

1999		2000		2001		2002	
CZK mill.	% SB *)	CZK mill.	% SB *)	CZK mill.	% SB *)	CZK mill.	% SB *)
167	6.2	393	10.6	521	14.7	1,277	33.7

*Source: MIT; Note: *) per cent share of the State Budget*

- ***To increase the subsidy for uranium mining phase-out***

Justification:

Although the damage caused by the extraction and processing of uranium in the Czech Republic is enormous (as many as 3,768 sites damaged by the uranium industry are recorded, including large areas of contaminated groundwater caused by chemical uranium extraction in the Ceska Lipa region), and they will have to be paid for by the State, the necessary funds from the State Budget have been so far only reduced. Thus, the future remediation will be costlier and the current environmental threats will persevere.

- ***To increase energy efficiency – to support energy savings measures***

Justification:

Poor energy efficiency is one of the most significant problems of the Czech economy. Even though it is the priority of the Energy Policy to increase efficiency, the State Budget has repeatedly overlooked the problem.

Expenditures into uranium mining phase-out and energy efficiency improvement have to be increased, as suggested, for instance, in the Medium-term Social and Economic Development Strategy (Table 20).

Table 20: Funds from the State Budget needed for the Energy Policy (CZK millions)

	2000	2001	2002	2003	2004	2005	2006
Programme	Reality	Reality	Reality	Approved budget	Projection	Concept	Concept
Mining phase-out, incl. remediation	4.050	4.252	3.644	3.631	5.060	5.260	5.700
Energy savings (MIT)	208	90	78	100	200	200	200

Source: Medium-term Social and Economic Development Strategy, p. 116

Regional Development

Regional Development is mainly funded from the budget chapter of the Ministry for Regional Development (MMR). It funds regional development support programmes, the countryside restoration programme, and the state tourism support programme. The volumes subsidies for the individual programmes are shown in Table 21.

Table 21: Regional development and tourism support programmes funded by the MMR

Type of subsidy	**Subsidy volume (CZK millions)**	
	2000	**2001**
Countryside restoration programme	577	611
Regional development total, within that	**1,070**	**1,990**
Regional development support programme for the NUTS 2 regions Moravia-Silesia and Northwest	75	47
Regional development support programme for the economically weak and structurally handicapped regions	3	7
Regional support programme for the restoration and infrastructure construction in the former military areas of Ralsko and Mlada	50	18
State tourism support programme	150	185

Source: MMR

Positive environmental impacts can be expected from the countryside restoration programme, especially due to its components of public space restoration and public greenery restoration and planting.

The regional support programmes for the processing industries, regional economic performance improvement, investment in obsolete industrial zones, and technical infrastructure construction, have negative environmental impacts.

The state tourism support programme has both negative environmental impacts (construction of spa infrastructure, tourism accompanying infrastructure and sport and recreation facilities) and positive (construction of public health facilities, urban greenery).

Recommendation:

- ***To consider the individual subsidies paid by the MMR as to their environmental impacts.***

Summary of Environmentally Harmful Subsidies

It is recommended to reconsider selected subsidies in the light of their environmental impacts, especially those listed below. The subsidies with palpable negative environmental impacts paid from the State Budget, including environmentally harmful tax allowances and exemptions, represent a total sum of CZK 12.29 billion (year 2001), as shown in Table 22. It is recommended to reappraise the individual items and to reduce them, or cancel and transfer them to other activities that are environmentally beneficial, or to cut down the tax burden on the population by their volume.

The total sum does not include the expenditures of non-budgetary funds, mainly the SFDI, SZIF, PGRLF a SFZP.

Table 22: Public subsidies paid from the State Budget (SB) recommended for reduction or cancellation due to their negative environmental impacts (CZK millions)

Subsidy type	**2000**	**2001**
SB subsidy for the State Agricultural Intervention Fund	2,478	4,230
SB subsidy for the Farming and Forestry Support and Guarantee Fund	2,175	1,309
Subsidies in forestry	940	760
Subsidies in water management	1,700	830
Regional development	1,070	1,990
Investment incentives – industrial zones investment	401	520
Total	**8,764**	**9,639**
Excise duty returned to farmers for 'green diesel'	954	1,287
Excise duty exemption for air transport	1,415	1,364
Total of other subsidies	**2,369**	**2,651**

Source: MoA

Preserving or Increasing the Environmentally Beneficial Expenditures from Public Budgets

Besides the reduction or Cancellation of environmentally harmful public subsidies, we recommend increasing selected subsidies with positive environmental impacts. These include, above all, subsidies for the following areas:

- development of public transport as an alternative to private automobile transport
- combined transport
- countryside restoration
- energy efficiency
- uranium mining sites remediation.

More funds should also be directed towards the development and maintenance of cycling paths, especially in towns and cities. The following table shows the development of the SFDI subsidies for cycling paths.

Table 23: SFDI capital expenditures on transport infrastructure (CZK millions, current prices)

	2001	*%*	**2002***	*%*	**2003***	*%*
Capital expenditures total	17,239	*100.00*	**25,862**	*100.00*	**28,928**	*100.00*
within that, roads	*7,965*	*46.20*	***14,187***	*54.86*	***17,304***	*59.82*
within that, cycling paths	*10*	*0.06*	***30***	*0.12*	***60***	*0.21*
Railways	5,492	*31.86*	**10,820**	*41.84*	**10,820**	*37.40*

*Source: SFDI (2002); Note: * budgeted*

Positive environmental impacts are also attributed to the following **tax allowances** in transport:

- Reduced road tax rates for vehicles meeting the EURO 3 emission limits
- Road tax reduction for vehicles used in combined transport
- Tax reductions for vehicles that take advantage of combined transport (which uses roads only for the transport to and from the nearest suitable railway station or port). The

reduction could be up to 100% if more than 120 combined journeys are made within the taxation period, and at least 25% if at least 31 journeys are made.

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Environmental Fiscal Reform in Poland as a Tool of Greening the State Budget 2003 - 2004

The Institute for Sustainable Development
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Introduction

The Environmental Fiscal Reform consists in shifting tax burdens from labour resources to the natural resources used. Its aim is to gain the environmental effect, along with the social effect, which is to encourage entrepreneurs to expand their economic activities and thereby to increase the employment in their companies. It is easier to increase employment under the conditions of economic growth, and, in turn, this growth is to a substantial extent the effect of economical and rational use of natural resources, mostly fuels, raw and other materials extracted from the environment and returned to it in the form of waste after they have been used in production processes and consumption. Thus, what occurs is the circulation of material flows; its economic viability and eco-efficiency must be maintained in order to ensure that production and consumption processes may unfold without large obstacles and that the equilibrium in the environment, societies and economies of individual states and regions is not upset.

The Environmental Fiscal Reform may assist in the achievement of these goals provided that the equilibrium of socio-economic systems is not upset by irresponsible and ill-conceived government policies which fail to take into account the principles of sustainable development. Therefore, it is necessary to pursue wide international co-operation with the aim of disseminating the concept of the Environmental Fiscal Reform and implementing it in the largest possible number of countries with benefits for the societies in these countries and for the actions taken to prepare similar reforms in other countries.

In accordance with the current state of knowledge, the condition for the Environmental Fiscal Reform to achieve its goals is the clear and transparent transfer of the proceeds from additional taxation on natural and environmental resources, increased prices or fees for services relating to the use of the environment or its pollution to the fields and activities the financial support for which is warranted by the achievement of specific economic, employment or environmental benefits. Transparent and understandable procedures for fiscal shifts within a specific ceiling of budget revenues – i.e. meeting the condition that the overall level of fiscal burdens does not grow – are a very useful argument for convincing politicians, Members of Parliament and administration officials as well as the influential business communities and trade unions to accept the Environmental Fiscal Reform as an instrument to reform public finance in the medium term, usually in the timeframe of four to five years.

Within the system of public finance, the Environmental Fiscal Reform creates a niche for a long-term transfer of specific amounts for the aforementioned purposes, making their implementation, e.g. by way of lower social insurance rates, independent of immediate political arrangements, cabinet changes or the condition of the economy. The Environmental Fiscal Reform is a qualitatively different approach to financing the priorities of environmental and employment policies from the solutions allowed by the traditional, immediate application of the aforementioned short-term instruments and mechanisms. EFR is a form of agreement on the restructuring of only a certain part of the public finance system to be concluded among politicians, Members of Parliament, the Government and influential social and sectoral groups.

Recently, in many countries the attention of the members of society who are involved in the matters of sustainable development focused on the issues relating to the reduction of subsidies which create demand for products and services having adverse impacts on the envi-

ronment and human health. These subsidies distort price relations in favour of products which are harmful for the environment or human health. As a result, these products become cheaper and, therefore, they are more willingly bought and consumed, competing with products and services which are more expensive, but healthier, which save the environment and its resources and protect human health. The elimination of such subsidies would have the same economic, environmental and employment-related effects as increases in prices and fees: *e.g.* the environmentally harmful products and services would become more expensive and they would be bought and consumed to a lesser extent. The resignation from subsidies may be a source of substantial savings in budget expenditures; in turn, these savings may be used to support environmental and employment-related actions and programmes.

The Environmental Fiscal Reform is an effective instrument for restructuring the public finance system in line with the criteria for achieving the goals of sustainable development. At present, a debate is underway in many countries concerning the re-evaluation of development goals and preparatory efforts are taken to reform part or the whole of public finance systems. New goals are added to the traditional dilemmas facing Governments and Parliaments as to what, when and how they should finance in the scope of the traditional areas of public finance: health, education and social insurance (regular and disability pensions), culture, social security, defence, security and sectoral development. The new goals relate to the environmental aspects of development, such as the mitigation of climate change, the prevention of droughts and floods, the creation of safeguards to avoid chemical and industrial disasters etc. This creates a broad context for the continuous adjustment of state budgets as well as those of local governments to the changing needs and priorities, *i.e.* the permanent shifting of resources available from one area to another. It is easier to implement restructuring processes in those countries that have developed and stabilised economies; it is much more difficult in the economies in transition, which do not have rich natural resources and available asset reserves accrued in the periods of strong economic growth and which are, therefore, more vulnerable to all types of crisis events. Nevertheless, such countries should also undertake efforts to make use of the ecological fiscal reform within the framework of the reforms of their taxation and financial systems.

At present, in the communities of economists and experts in different fields of science and practice, the opinion begins to prevail that, unless the economic, legal and regulatory conditions are ensured on the scales of the world, regions and particular countries for a change in the production models and consumption patterns to those more friendly to the society and the environment, the climatic, environmental, economic and employment related equilibrium will be increasingly often upset, causing, in turn, different extreme events leading to unemployment, poverty and exclusion of population groups and entire societies.

Chapter I

The Environmental Fiscal Reform in Poland?

The Environmental Fiscal Reform: Some interest and no implementation

The Environmental Fiscal Reform has not yet been applied in practice in Poland. Still, research centres[21] and, recently, non-governmental organisations[22] became interested in it. For a long time, EFR was not considered and envisaged by the Government as an instrument of fiscal and environmental policies and as a mechanism to stimulate the development of the labour market. The period of political and economic transition was not favourable for the administration to become interested in instruments and regulations on taxes and fees which would be alternative to the existing ones. The Polish system of financing environmental projects and investments was then dominated by the Environmental Funds which provided a sufficient base for the implementation of the most important goals and priorities of the national environmental policy.

The recession in 2000-2002

In 2000-2002, Poland saw signs indicating that the economy was slowing down and the economic condition of enterprises and households was worsening as well as that, to some extent, the rate of improvement in the state of the environment decelerated. This was caused by:

- the emergence of recession events in the world economy, including Poland's main economic partners;
- the continuation of expensive, though indispensable economic transition processes, including the restructuring and privatisation of non-viable enterprises, industries and sectors;
- the excessively intensive forced slowing down of the economy, which led to high levels of interest on investment and consumption credits, discouraging an expansion of investment

[21] Mr. Grzegorz Peszko may have been the first to carry out a simulation to estimate (using the Computable General Equilibrium Model) the impacts of the implementation of Ecological Tax Reform (ETR) on the Polish economy in 1995. (See *Green Budget Reform in Europe*, ed. Schlegelmilch, Kai. Springer Verlag. Berlin-Heidelberg 1999).
Professor Jerzy Śleszyński and Dr. Olga Kiuila from Warsaw University continued the simulation to estimate the impact of ETR on the Polish economy in the years 2000-2002, but based on other assumptions and using more recent data (See the research project: *Ecological Tax Reform as a Tool of Sustainable Development in Poland at the Beginning of the 21st Century*. Institute for Sustainable Development. 2000-2001).
Research on the implementation of the environmental taxes and ETR was performed by a group of researchers from the Cracow University of Economics headed by Professor Józefa Famielec in the years 2002 – 2003. (See *Analysis of Environmental Tax Incentives in selected Western Countries and Possibilities of their Implementing in Poland*. Cracow February 2003).

[22] The Institute for Sustainable Development (Warsaw) was engaged in the years 2000-2001 in researching the concept of ETR and possibilities of its introduction in Poland. (See: *Ecological Tax Reform. Tax System as a Tool of Sustainable Development in Poland in the first Decade of the 21st Century*. Institute for Sustainable Development. Report 2/2001. Warsaw November 2001).
The aftermath of this work was a big international Warsaw Conference organized on January 16-17th 2003 by the Institute for Sustainable Development in co-operation with the Institute for Research on Market Economy (Gdańsk) and the Institute for Ecological Tax Reform (Cracow) with support and co-operation of the Regional Office of the World Bank in Warsaw. Attended by many experts and specialists from the European Commission, OECD, the World Bank and the member and applicant countries, that conference strongly influenced the dissemination of the concept of Ecological Tax Reform in Poland.

activity and increased consumption as well their shifting to those more favourable for environmental protection and economical and rational use of its resources.

At that time, the State budget was overburdened by:

1. excessive expenditures of social nature;
2 the financial effects of the implementation of systemic reforms, particularly those of health care and regular and disability pension insurance;
3. the excessive subsidies and allocations to enterprises and entire industries and sectors.

The State budget was also reduced by numerous tax reliefs and exemptions granted to enterprises and individuals, which substantially diminished its capacity to support tasks favourable for development and the environment.

The effects of the recession in 2000-2002 for sustainable development

The downswing in the economy was reflected in the deterioration of the basic macroeconomic indicators (see Annex 1) and had an adverse effect on the other pillars of sustainable development: society and the natural environment. Poland's economy saw:

- a fall in its economic growth rate (in 2001, its GDP grew by 1,0% only and in 2002 by 1.4%, whereas in 1999 and 2000 it was about 4% on average);
- a fall in the investment activity of enterprises (in 2001, the fall in investment expenditures in the economy was 8.8% and in 2002 they fell by another 7.2%);
- a decrease in the flux of foreign direct investment from USD 8.2 billion in 2000 to USD 7.0 billion in 2001 and USD 4.1 billion in 2002;
- a slower rate of the restructuring and privatisation of state-owned enterprises as well as a halt to the establishment of new enterprises in the private sector, along with a decline in their net number, as a result of reduced economic activity, particularly in the SME sector.

The slowdown of the economic growth rate had the following effects:

- The unemployment rate grew from 15.1% in 2000 to 17.5% in 2001 and 18.1% at the end of 2002.
- The scale and extent of poverty expanded, with about 8.1% of the population, i.e. about 3 million persons, falling into extreme poverty, below an arbitrary minimum of livelihood, in 2000-2202.
- The geographical and sectoral differentiation in household incomes grew, e.g. in relation to the availability of work; it was greater in large urban agglomerations and lesser in disadvantaged post-industrial and rural areas.

The lower revenues of the State and the local government sector contributed to a decrease in expenditures on environmental programmes and projects. In consequence, this was reflected in:

- a lower share of environmental expenditures in GDP (this share fell from 1.4% in 1999 to 0,7 % in 2002) (see Annex 2);
- a reduced number of municipal environmental infrastructure facilities commissioned in a year, including wastewater treatment plants, along with their decreased capacity, wastewater collecting and water supply systems, the capacity of water intakes and the capture capacity of particulate and gas pollution controls (see Annex 3);
- enhanced geographical divergence – particularly between large cities, and small towns and rural areas – in the local provision of environmental infrastructure and its use by the population;

- a reduced rate, in 2000-2002, of the improvement in the main indicators for the state of the environment and the consumption of its resources, with these indicators worsening in several cases[23];
- the maintenance of a relatively high share of fossil fuels in the national energy balance[24];
- a reduced rate of the improvement in the indicators for the consumption of energy and natural resources per unit GDP[25].

On the basis of this short and, of necessity, incomplete review of the situation in the particular pillars of sustainable development, it can be concluded that the instruments of budget, social and environmental policies as applied in 2000-2002 were not sufficiently effective to meet the difficult internal and external challenges. Although the situation improved somewhat in 2003, so far no breakthrough has come and the existing problems need further action as well as the application of new instruments, such as the Environmental Fiscal Reform.

The debt of the public finance system

An increase in the debt of the public finance system was one of the effects of the recession in 2000-2002 and the expensive systemic reforms pursued over that period (those of the system of regular and disability pensions and the health care system) as well as the restructuring of certain sectors of the economy (hard coal mining), along with the failure to make more determined efforts to limit social expenditures.

The data available (see Annex 4) unambiguously indicate that the process of growing indebtedness of Government and local government institutions as commenced in 2000-2002 persists and will continue in 2004. This means that the unfavourable conditions for the budget financing of development and environmental objectives will continue and that it will be far more indispensable than previously to draw on the financial resources of the sector of enterprises and those of the sector of households. The instrument of the Environmental Fiscal Reform should be applied in the areas "Environment" and "Employment"; still, it needs to be part of a wider reform of public finance in Poland.

EFR and the strategic macroeconomic goals

The use of the concept of Environmental Fiscal Reform in Poland must be considered in the context of the Government's implementation of the strategic goals of macroeconomic, monetary and fiscal policies on which Poland's entry into the Economic and Monetary Union will depend. This is related to its meeting of the convergence criteria in 2003-2006, including the inflation criterion, i.e. the sustained achievement of inflation not exceeding by more than 1.5% the mean inflation rate from three EU Member States with the lowest inflation rates[26]; the criterion of stability of the currency exchange rate[27]; along with the criterion of the deficit

[23] For the first time since the beginning of the systemic transformation in Poland in 1989 there were increased emissions of sulphur dioxide and dust, as a total and as the shares of power plants, industrial auto-producers and other stationary energy sources, as well as those of nitrogen oxides, as a total and as the shares of power plants, industrial auto-producers and other stationary energy sources; and so were water withdrawals for manufacturing and domestic purposes and wastewater discharges.

[24] About 70% of the energy used in the economy, transport and the municipal and household sector in Poland was produced from hard coal and lignite, with only 2% from renewable energy sources.

[25] This indicates slight progress in the activities designed to save energy and improve the energy efficiency of the consumption of energy and natural resources.

[26] The inflation criterion was achieved by Poland in August 2002.

[27] Exchange rate fluctuations of the currency of one of the EU Member States against euro should fall for at least of two years within the normal interval of admissible fluctuations around the fixed parity exchange rate and in the period of those two years the exchange rate of the national currency could not be devaluated against the

of the sector of Government and local government institutions not exceeding 3% of GDP as well as the debt of the sector not higher than 60% of GDP.

The factors determining EFR in Poland

However, the concept of the Reform should take into account the following:

- the current economic, employment and environmental situation in place following the period of recession in 2001 and 2002;
- the strategic goals and priorities of the national macroeconomic policy in relation to the accession to EMU;
- the goals and priorities of the national environmental policy, including particularly those arising from the accession-related commitments and Poland's other environmental commitments under international and bilateral agreements;
- the need to restructure the public finance sector in relation to development and employment generating policies;
- the specific conditions in the particular sectors of industry, particularly those undergoing intensive restructuring processes designed to ensure their development and enhanced efficiency (in Poland, these sectors include mining, steelmaking, heavy chemistry etc,);
- the public consent and the political consent of the major political parties, Members of Parliament, entrepreneurs, farmers and trade unions to the shifting of fiscal burdens from labour to natural resources and pollution emissions.

Gaining the political consent to the implementation of EFR

The Environmental Fiscal Reform should be carefully considered and designed, since gaining the consent of the influential political and economic forces to its launch will require a model satisfying a number of partly contradictory criteria to be negotiated out, including the criterion of maintaining the competitiveness of Polish enterprises on the international markets, the criterion of neutrality for the budget revenues and the criterion of equitable distribution of fiscal burdens. Given the specific nature of the current situation of the State and local government budgets in Poland, particularly in view of the need to meet the accession-related financial and environmental commitments, the realistic EFR model must provide for certain additional burdens on some economic entities, budget-supported units and households, which will not be able to rapidly and effectively adjust to the new prices of energy, fuels and raw materials as well as the environmental fees for the use of natural resources and for the releases of pollutants into the environment.

The issue of the adjustment of the users of the environments and natural resource to the EFR incentives

The extent of the financial loss to be suffered by certain entities in relation to the implementation of EFR in practice will depend on the rapidity and effectiveness of their restructuring and adjustment to the new market conditions. The legislator will expect these entities to make changes in production techniques and technologies, to undertake projects designed to ensure economical and rational use of fuels, energy, raw materials and intermediates, to rationalise the use of means of transport and to appropriately redesign the products manufactured so that they meet customers' expectations as to the utility parameters and are, at the same time, less material-intensive. The budget and household sectors will be expected to

currency of any other Member State of the EU on the own application of the candidate country seeking membership in the Economic and Monetary Union (EMU).

change their purchase structure and their consumption patterns so as to ensure more economical use of fuels, energy, water, space and other resources of the natural environment.

The financing of environmental goals in Poland and EFR

It is now estimated that the system of environmental policy instruments as applied to date in Poland no longer provides adequate resources for financing the most important goals and priorities of significance for meeting the need to maintain the appropriate quality of the natural environment and to satisfy Poland's international commitments related to its accession to the European Union and under its multilateral and bilateral memoranda of understanding and agreements. Poland's system of environmental policy instruments encourages more economic utilisation of the environment by its users and serves to collect resources to finance the most important needs in this field. The major instruments of the national environmental policy and partly of the national fiscal policy designed to meet the goals and priorities of the Polish environmental policy include:

- the fees for the economic use of the environment and making changes in it (particularly for water withdrawals);
- the fees for the pollution of the different elements of the environment (including non-material pollution);
- fines as a broadly conceived instrument to enforce compliance with standards, injunctions, bans and other forms of direct regulation;
- public subsidies for environmental projects, including compensations for restrictions on the ownership right in relation to the takeover of areas and sites with natural values for the purposes of different forms of conservation;
- product charges and environmental deposits;
- royalties for the use of public facilities for environmental protection;
- a system of tax preferences (in principle, classified as fiscal policy instruments) which tends to adjust to the solutions in place in the EU Member States.

In the transition period to date, the Polish system for financing environmental goals has been dominated by fees and fines (see Annex 5), which have been the main source of the revenues of the Environmental Funds. However, the official data indicate that the existing system of fees and fines was not efficient from the point of view of its income generating function. This can be clearly seen in the data contained in the following table.

Table 1

Incomes from payments for the use of the environment collected in 2000-2002 by marshal offices* *PLN million (current prices)*

Specification	2000	2001	2002	2003
Incomes total, of which:	**1 500,9**	**1 367,8**	**1 770,5****	**n.a.**
Environmental charges, of which:	1 413,1	1 288,1	1 690,3	n.a.
- from water management and water conservation	497,8	412,0	674,8**	n.a.
- from air contamination	761,0	731,9	712,9	n.a.
- from waste disposal and others	154,3	144,2	302,6**	n.a.

* Marshal offices in voivodships are self-government bodies authorized to assess and collect environmental charges. ** The incomes in 2002 are incomparable with those in the previous years because they also include outstanding payments collected from charge-payers being in arrears in charges for water abstraction and waste disposal in the previous years. The system of the collection of environmental charges was also substantially improved. Source: EkoFinanse. Nos. 7-8, June –August 2003, pp. 11-12.

It was only recently that the system of fees and fines applied in Poland was supplemented with product charges and environmental deposits (as from 1 January 2002), which turned out to be inefficient, particularly as regards their function of generating resources for environmental purposes. To a slight extent, tax preferences are also used (see Annex 6).

The system of environmental fees and fines as well as the system of fiscal incentives are expected to be used, with some modifications, in 2003 and 2004, too. In the light of what was said above, it should be supplemented by the mechanism of the Environmental Fiscal Reform, since only this solution would provide adequately strong arguments in the political debate for the introduction of major changes in the level and scope of environmental expenditures in Poland in the coming years.

The issue of the launch of compensation mechanisms

The EFR mechanism in Poland will encompass measures to mitigate the financial effects of the implementation of EFR on certain industrial sectors and enterprises which are in the course of intensive restructuring designed to enhance their efficiency and to reduce their impact on the environment as well as on household groups which will not be able in the short term to change their consumption patterns and to undertake significant saving action. This may consist of the launch of programmes to co-finance the adjustment projects undertaken by these entities using part of the EFR proceeds. Under the present social and economic conditions, within the framework of EFR, it will be necessary to launch limited forms of compensation for increases in prices and environmental fees to certain household groups. In the case of such sectors as mining or steelmaking, it will be necessary to adopt transition periods until the end of the restructuring programmes now underway. An alternative solution, in which the time of the launch of EFR would be postponed to later years, seems to be less beneficial for the implementation of Poland's development strategy, particularly in the medium term until 2010.

Chapter II

The excise tax and the Environmental Fiscal Reform

The State budget in 2002-2004

In terms of its level, dynamics and structure, the State budget for 2003-2004 is determined primarily by the recession events in 2000 and 2002, which gave rise to a dramatic increase in unemployment and the debt of the public finance system. Another factor which now strongly determines especially the expenditures under the State budget is the need for Poland to meet the convergence criteria which indicate the economic condition of the applicant countries and are the prerequisites for their membership in the European Union. This imposes restrictions for the State budget, what means the limitation of expenditures and the indispensable measures to restructure the public finance. These processes of change can be seen in the structure of the budget revenues and expenditures in 2003 and 2004. In particular, 2004 should be a breakthrough year when the measures to start the reduction of the public debt level will begin.

Systemic changes in Polish tax system in 2002 - 2003

Most changes in the Polish tax system were designed to create the conditions for faster economic growth. In 2002-2003, these changes included:

- the introduction at the end of 2002 of accelerated depreciation of fixed assets, allowing for a 3% depreciation allowance already in the first year of the use of a fixed asset;
- the reduction in 2003 of the corporate income tax level by 1% with respect to the previous year, to a level of 27%;
- the introduction of regulations ordering the tax system and facilitating the start-up and conduct of individual economic activity;
- the introduction of measures to cut the debts of economic entities which submit realistic action plans for stabilisation and development, create the opportunities for increased employment and pay a restructuring charge adding to the revenues of the State budget;
- the introduction of measures facilitating the reduction and elimination of the chain of delayed mutual payments.

In addition, in 2003, the excise tax rates on spirits, wine and beer were reduced by 30% and in the same year the excise tax on the liquid fuels was maintained at the real level of 2003. Since 2001 changes have been introduced to expand the revenue base of the State budget, including the imposition of taxes on certain money capital gains which used to be untaxed and the introduction of the excise tax on electric energy.

Systemic changes in Polish tax system 2004

In 2004, systemic changes will continue in order to stimulate faster economic growth and the alignment of the Polish tax system with the EU system. These changes will include:

- the adjustment of the existing excise tax schemes to the European Union standards; the introduction of tax warehouses, the system of suspension of excise tax collection and the procedures for trading in excisable commodities for which the tax is suspended and those for which the tax has been paid;

- the introduction of new VAT regulations as a result of the full alignment of Polish VAT legislation with the EU regulations;
- the reduction of the CIT rate from 27% to 19%, along with the elimination of existing reliefs and exemptions;
- the introduction of the 19% PIT rate for natural persons conducting economic activity who have until now paid their taxes according to the progressive scheme;
- the expansion of the share of local governments in the revenues from indirect taxes, increasing the stream of resources at their disposal and allowing for more flexible financial management by local governments, thus creating the basis for co-financing (and pre-financing) the investment projects under the Structural Funds and the Cohesion Fund;
- the unification of the taxes on capital gains by applying a uniform 19% rate and additionally expanding the tax base, given the expiry at the end of 2003 of the exemption for the sales of securities in public trading and the revenues from the realisation of the rights under the securities;
- the further ordering and changes in legal and administrative measures laying down the principles of the start-up and conduct of economic activity under the conditions of the European Union.

These changes should contribute to faster economic growth, reduced unemployment and Poland's meeting of its international and bilateral environmental commitments. The Government documents on the State budget and public finance in 2003 and 2004 do not mention the use of the Environmental Fiscal Reform as an instrument to gain additional benefits in the aforementioned areas of sustainable development.

- ***Initial (forecasting) results of systemic changes in Polish tax system in 2003 – 2004***

The State budgets for 2003 and 2004 already show slight positive effects of change in the structure of expenditures, consisting of the stabilisation of expenditures for social and social security purposes and the increased development-stimulating expenditures and those supporting the development of science and higher education (see Annex 8). It is particularly interesting to note the changes which will come in 2003-2004 in the revenues and expenditures of the target funds and, as a result, in the State budget allocations for the functioning of these funds (see Annex 9).

The change in the tax system should be regarded as one of the most important changes in the public finance system to take place in Poland in 2002-2004. Their impact on the structure of the budget may still be hardly seen when considering aggregated data, but it can already be felt by large taxpayer groups, both in the positive sense, as encouraging to start economic activity, invest and hire new employees, and in the negative sense, as adding to the costs of economic activity and the costs of living. The Environmental Fiscal Reform will have in practice no importance whatever in this process. However in next chapter we will describe results of simulation of introducing of EFR into Polish fiscal system under budgetary conditions in the years 2003 – 2004.

The excise tax and EFR in Poland

The significance of the excise tax in the State budget revenues is essential for the possibility of implementing ERF in Poland. This results from the fact that, indeed, this is the only substantial existing source of the revenues of the State and local government budgets which

may provide the basis for the implementation of EFR, perhaps apart from certain unknown amounts of public resources which may now be classified as environmentally harmful subsidies and which may be saved by the budget, in part or as a whole, after these subsidies have been removed. In turn, the resources saved may be recycled e.g. to lower the rates of regular and disability pension contributions (reducing the employment costs) or to finance environmental programmes in the sector of enterprises or in the municipal sector.

The excise tax against the background of the other State budget revenues

The excise tax plays an important role in the State budget revenues. It represents slightly more than 20% of the total budget revenues and is, as a whole, the revenue of the State budget.[28] In 1999-2004, the share of the excise tax revenues in the State budget revenues shows a very slight growing trend (see Annex 7). In 1999, this share was 20.0%, to grow to 21.9% in 2002. The growing share of the excise tax in the State budget revenues resulted from the fact that the excise tax revenues increased faster than the overall budget revenues. It is expected that in 2004 the excise tax revenues will remain at a level close to that in 2003. Among others, this is a result of Poland's accession to the European Union and the related need for the excise tax collection system to be aligned with the EU requirements, by establishing excise tax warehouses. In 2004, this will have a negative effect on the State budget revenues as the result of a postponement of the stream of excise tax revenues. It will not affect the budget revenues from this tax in the subsequent years.

- ***The structure of the State budget revenues from the excise tax***

In terms of their share in the total excise tax revenues, motor fuels are by far the most important excisable commodity group. In 1999-2001, their share in the excise tax revenues varied about 46%. In the subsequent years, their share fell slightly, as the excise tax was levied on electric energy in 2002. Apart from motor fuels, the greatest share in the excise tax revenues is represented by the excise taxes on tobacco products and spirits. In the draft budget for 2004, the revenues from the excise tax on motor fuels will represent 44.6% of the total excise tax revenues. It should also be noted that the draft budget for 2004 takes into account the introduction of so-called biofuels. The entry into effect of the relevant Act will have a negative effect on the budget revenues, since it is envisaged that fuels containing biocomponents will be subject to a tax relief in proportion to the content of biocomponents in the fuel. The table below shows the exact structure of the State budget revenues from excise taxes.

[28] In the case of direct taxes such as PIT and CIT, part of them goes to self-government units.

Table 2

Incomes from excise taxes on major excisable commodity groups

PLN million

Specification	1999 peformed	2000 peformed	2001 peformed	2002 peformed	2003 planned*	2004 forecast**
Excise tax	**25 208,1**	**27 312,0**	**28 860,5**	**31 489,8**	**34 413,0**	**34 614,7**
of which:						
- motor fuels	**45,9%**	**46,0%**	**45,8%**	**43,9%**	**42,9%**	**44,6%**
- spirits	18,4%	16,2%	14,6%	12,3%	10,0%	11,6%
- tobacco products	25,2%	23,3%	25,3%	25,2%	24,1%	25,4%
- beer	6,0%	6,5%	7,0%	6,7%	6,3%	6,7%
- wine	1,8%	2,0%	2,0%	2,0%	1,9%	2,2%
- cars	**1,9%**	**3,4%**	**2,7%**	**2,1%**	**2,2%**	**1,6%**
- electric energy	**0,0%**	**0,0%**	**0,0%**	**4,9%**	**7,4%**	**7,6%**
- other excise taxed products	0,9%	2,6%	2,6%	2,8%	2,4%	1,4%

* the draft State budget for 2003 included so called conditional incomes in the amount of PLN 565 million, introduced into the Act on the State budget during Parliamentary discussions - Article 49 of the Act on the State Budget for 2003 of December 18, 2002 (Official Journal of December 30, 2002). It was also assumed in the budgetary plan for 2003 that additional incomes would be gained from the improved collection of excise taxes on spirits and tobacco products. Those additional conditional incomes are not included in the incomes presented in the table.

** the planned incomes in 2004 reflect the loss in incomes due to the introduction of the system of tax warehouses and the lower incomes from excise taxes due to the opening of the internal market following the accession to the EU.

Source: Data of the Ministry of Finance

The structure of the revenues from the excise tax on motor fuels

Statistical data showing the revenues from the excise taxes on the particular fuel types are not available. On the basis of the statistical data available, it is only possible to estimate the excise tax revenues by major groups of motor fuels. The table below shows the estimated revenues from the excise taxes on motor fuels in 2002 broken down by leaded petrol varieties, lead-free petrol varieties, diesel oil and liquefied gas. However, it should be noted that this breakdown is based on incomplete statistical data and should be treated as a certain approximation rather than as the final data. In estimating the excise tax revenue levels from the individual type of motor fuels, account was taken of the structure of fuel consumption, excise tax reliefs applicable to all motor fuels and the excise tax rates.

Table 3

Estimated incomes form taxes on major excisable motor fuel groups.

PLN million

Incomes from excise tax on motor fuels in 2002, of which:	**Leaded petrol**	**Unleaded petrol**	**Diesel oil**	**Liquid gas**
13 821,9	29,1	8 103,2	5 413,8	275,8
100%	0,2%	58,6%	39,2%	2,0%

Source: The Author's own estimates based on the data of the Ministry of Finance and Central Statistical Office.

The taxes on energy sources in 2002

At present, the excise tax is levied on all types of motor fuels (petrol varieties, diesel oil varieties, liquefied gas for use in cars etc.), electric energy and light heating oil (the excise tax revenues from heating oil feature in the item "revenues from the other excisable commodities", given the fact that heating oil is not a motor fuel).

In the case of petrol varieties, the excise tax rate depends on the lead content (leaded and lead-free types of petrol) and their purpose (e.g. petrol types for aircraft). In the case of diesel oil, the excise tax rate depends on the sulphur content, following the principle that higher excise tax rates are levied on diesel oils with higher sulphur contents.

The excise tax rate is set as a specific amount of money for 1000 litres of the product, with the exception of liquefied gas where the rate is laid down for 1 tonne of the product.

Table 4

Excise tax rates on energy carriers valid in Poland in 2002

PLN

Specification	**Unit**	Excise tax rate
Petrol motor fuels and basic petrols, of which:	1000 l	1 634
(Ethyl) gasoline 94, 98 and their basic petrol	1000 l	1 629
Unleaded petrol	1000 l	1 464
Aircraft fuels	1000 l	1 704
Motor oil (diesel), of which those with sulphur content:	1000 l	1 104
more than 0,05% up to 0,2%	1000 l	1 090
more than 0,005% up to 0,05%	1000 l	1 027
up to 0,005%	1000 l	980
Aircraft fuels for jet turbine engines	1000 l	1 003
Motor oils*		20% (if imported 25%)
Heating oils (60% or more undergoes distillation by volume at 350 degrees Centigrade)	1000 l	160
Kerosene	1000 l	1 704
LPG for cars	1000 kg	390
Electric energy	kWh	0,02

* - in the case of domestic production except oils for ship engines, lubricating oils for aircraft piston engines, lubricating oils for aircraft jet engines, and ship oils qualified by the Polish Standard (Polish Standard PN-75C-96089/01-04) as Marinol of types CA,CB, CC, CD Source: Regulation of the Minister of Finance of 22 March 2002 on the Excise Tax.

The changes in the excise tax in 2004[29]

In 2004, the policy of reducing the real excise tax burdens on certain excisable commodity groups will be continued. This will apply primarily to motor fuels, spirits, beer and wine. The excise tax rates on these commodity groups will grow at a rate equal to half the

[29] Under the assumptions for the State budget as adopted by the Council of Ministers.

expected rate of increases in the prices of consumer goods and services. Given the fact that the rates on the aforementioned commodity groups are levied in the form of set amounts of money for specific quantity, their increase at a lower mean annual rate than the inflation rate will mean that in real terms the excise tax burdens on them will be reduced.

In the case of the excise tax rate on tobacco products, it is assumed that in 2004 the overall excise tax rate (the excise tax rate on tobacco products is based on quantity and percentage factors) will grow at a rate of 9.1%. Such an increase in the rate results from the track adopted to reach by the end of 2008 the minimum rate on tobacco products in effect in the European Union.

At present, there are no plans to change the excise tax rate on electric energy in 2004, nor in the later years.

The excise tax rates and the minimum rates in effect in the European Union

At present, in the case of the major excisable commodity groups, the excise tax rates in Poland are higher than the minimum rates in effect in the European Union. This is not the case with the excise tax rate on tobacco products on which lower quantity-based excise tax rates are levied in Poland than the minimum rate in effect in the European Union. The table below shows the minimum excise tax rates in the European Union and the excise tax rates in Poland in 2003 for certain products subject to harmonisation.

Table 5

Excise tax rates in Poland and the minimum excise tax rates in the European Union .

Excisable tax commodity groups	**Minimum excise tax rates in the EU (EURO)**	**Excise tax rates in Poland (EURO*)**
Spirits	550,0 EURO / hl of 100% alcohol	1075,4 EURO/hl of 100% alcohol
Leaded petrol	**337,0 EURO / 1000 l.**	**408,65 EURO / 1000 l.**
Unleaded petrol	**287,0 EURO / 1000 l.**	**366,12 EURO / 1000 l.**
Diesel oil	**245,0 EURO / 1000 l.**	**256,8 EURO / 1000 l.**
LPG	**100,0 EURO / 1000 kg**	**109,98 EURO / 1000 kg**

* - according to the NBP exchange rate from October 1, 2002:. 1 EURO = 4,0915 PLN
Source: data from the Ministry of Finance and the EU

At present, within the European Union work is underway on a new Directive concerning the minimum excise tax rates on energy sources. Compared with the excise tax rates in effect in Poland, the proposal for the Directive provides for higher excise tax rates e.g. on diesel oil and LPG; in the case of our country, the proposal also expands the catalogue of excisable commodities, to include e.g. hard coal and natural gas.

Chapter III

The Environmental Fiscal Reform as an instrument to "green" adjust the State budget

The concept of the Environmental Fiscal Reform (the Cracow University of Economics, Cracow, February 2003)

A realistic and, at the same time, pragmatic proposal for an adjustment of the State budget in Poland based on the criteria of sustainable development was recently presented by a group of researchers from the University of Economics in Cracow[30]. The purpose of their proposal is to use the Environmental Fiscal Reform as an instrument to adjust the State budget in four successive years. Arbitrarily, 2001 was adopted as the baseline, as it is the last year for which reliable data are available on the consumption of fuels and energy and on the rates of social security contributions and the contributions to regular and disability pension insurance incurred by employers and employees.

The core items of the budget adjustment proposed over these four years include:

- the gradual introduction of taxes (or higher rates of already existing taxes) on energy carriers: hard coal and lignite, electric energy, petrol varieties, diesel oil and heating oil;
- the reduction of contributions to social security insurance and contributions to regular and disability pension insurance, easing these burdens equally for employers and employees by 0.25 p.p. per year.

It is also assumed that these operations need to be conducted in a way which would be neutral for the budget revenues, i.e. the additional budget revenues from the new taxes or the higher rates of existing taxes should be recycled as a whole to reduce contributions to social security insurance and contributions to regular and disability pension insurance as incurred by employers and employees. The authors of this concept propose a flexible system for introducing changes in tax rates and equivalent reductions in contributions to social security insurance and contributions to regular and disability pension insurance. It seems that this system is consistent with the needs of the administration which will have some freedom in selecting the most favourable moment to introduce new tax rates from the point of view of the harmonisation of the fiscal budget policy with the goals of the national monetary and macroeconomic policies. On the other hand, it seems that it will satisfy the interests of employers and employees who will know the track for the reduction of labour costs.

The authors of this concept adopted the following scheme for calculating the shortage of the budget revenues as a result of the reductions in contributions to social security insurance and contributions to regular and disability pension insurance. First, they calculated the total burdens of employers and employees caused by insurance contributions. Under the conditions of 2001 (as well as those of 2002), the total burdens of employers and employees caused by insurance contributions were estimated at 45.4% of gross salaries. Taking into account the fact that in 2001 the budget revenues from contributions to social insurance contri-

[30] Survey on implementation of the environmental taxes and the ETR have been performed by a group of researchers from Cracow University of Economics managing by Professor Józefa Famielec in the years 2002 – 2003.

butions and contributions to regular and disability pension insurance amounted to almost PLN 72 billion and assuming that their rates would be reduced overall by a uniform 0.5% per year, the authors estimated the shortage in the budget revenues caused by these reductions. Their next step was to estimate the indispensable increases in the tax rates on fuels and energy and to distribute them (over the four successive years) in order to offset this shortage.

On the revenue side, the authors considered two options for raising the taxes on fuels and energy carriers: in the basic option, new taxes (or new rates) would be levied on enterprises and households, whereas in the alternative option enterprises would be exempt from taxes on coal and electric energy – and the additional shortage caused by this exemption would have to be offset by higher taxes on households.

The table below shows the effects of the introduction of new excise tax rates on certain excisable entities and the effects of the reductions in the rates of contributions to social security and contributions to regular and disability pension insurance under the two options of the Environmental Fiscal Reform.

Table 6

Additional (in comparison to basic year) incomes of the State budget and deficits in incomes from social security contribution funds as a result of increases in excise tax rates and reductions in the rates of contributions to social security funds in successive 4 years of the ETR (basic year 2001)

PLN million

Specification	**Basic scenario**		**Alternative scenario**	
	Additional tax incomes	Deficits in incomes of social contribution	Additional tax incomes	Deficits in incomes of social contribution
1 year of ETR	780,7	792,4	780,7	792,4
2 year of ETR	1 653,5	1 584,8	1 567,7	1 584,8
3 year of ETR	2 488,0	2 377,3	2 355,2	2 377,3
4 year of ETR	3 144,2	3 169,7	3 140,9	3 169,7

Source: *Analysis of Environmental Tax Incentives in selected Western Countries and Possibilities of their Implementing in Poland*. Cracow University of Economics. Department of Industrial and Environmental Policy. Cracow, February 2003, tables 23 - 24 pp. 202 - 203.

It can be seen that the additional revenues from higher excise tax rates on selected products may quite readily balance the shortages caused by reductions in the rates of contributions to social security and contributions to regular and disability pension insurance under both alternatives of the Environmental Tax Reform. However, in selecting the option, it is necessary to take into account the indispensable increases in excise tax rates and the range of commodities they would have to cover in order to offset the shortages caused by reductions in the rates of contributions to social security and contributions to regular and disability pension insurance. From this point of view, it is less likely that the alternative option may be acceptable to the Government and social partners.

The authors compared the retail prices of fuels and energy in 2001 with the tax rates on fuels and energy as calculated for successive years. These estimates indicate unambiguously that in the case of the basic option the increases in tax rates represent a slight percentage of the retail prices of fuels and energy. When an extensive range of fuel and energy users (enterprises) are exempted from the uniform tax rates, they need to be substantially raised so as to compensate for the losses in the budget revenues as a result of these exemptions.

Table 7

Comparison of retail prices of energy and motor fuels in 2001 (basic year) with prices under the basic and alternative ETR scenarios

PLN million

Specification		**Basic scenario**		**Alternative scenario**	
Energy and motor fuels	Price in PLN/kg (kWh)	Excise tax rate PLN/ kg (kWh)	Share of excise tax in price in %	Excise tax rate PLN / kg (kWh)	Share of excise tax in price in %
Hard coal	0,45	0,007	1,6	0,020	4,4
Electric energy.	0,37	0,010	2,7	0,030	8,1
Petrol	3,10	0,075	2,4	0,185	6,0
Diesel oil	2,60	0,065	2,5	0,175	6,7
Heating oil	1,60	0,030	1,9	0,080	5,0

Source: *Analysis of Environmental Tax Incentives in selected Western Countries and Possibilities of their Implementing in Poland*. Cracow University of Economics. Department of Industrial and Environmental Policy. Cracow, February 2003, table 25, p. 204.

This is a sort of warning against taking a decision to exempt certain taxpayer groups from the governance of uniform tax regulations. Instead, compensations for certain narrow groups of enterprises should be suggested.

The concept of the Environmental Tax Reform (Institute for Sustainable Development, Warsaw, October 2003)

At present, high unemployment is one of the most urgent social problems. Considering the need for the conduct of the Environmental Tax Reform, it is assumed that changes in the public finance system should, on the one hand, foster employment and, on the other, have an environmental effect in the form of reduced consumption of environmentally harmful products (i.e. the consumption or production of which is not environmentally sound).

The employment effect can be gained by reducing the labour costs. In order to achieve this, it was proposed to reduce semi-tax costs related to employee salaries as existing in the form of pension insurance contributions. The general assumption of the simulation conducted was that the loss arising from a reduction in the pension contribution (lesser revenues to the insurance system) would be offset by higher excise tax revenues. It was assumed that in the case of lower contributions the loss of insurance companies would be covered by higher allocations from the State budget. The scheme as a whole should be neutral for the financial result of the public finance sector.

At present, the pension contribution is paid by both the employee and the employer at a level of 9.26% of the gross income. In the present case, it was proposed that the rate should be reduced by 0.5% for the employer and the employee. The scheme consisting of reduced labour costs for the employee and the employer is justified on the grounds that, on the one hand, the reduction in the employer's costs is expected to bring the employment effect and that, on the other, the reduction in the burden on the employee's salary (i.e. an increase in the employee's net income for a given gross salary) is expected to partly compensate for additional expenditures on the products on which higher excise tax rates would be levied.

The following assumptions were made for the simulation:

- The financial effects of ETR were given under the conditions of 2003. In order to ensure greater transparency, it was assumed that the reform could be implemented within one year, as this would only slightly affect an evaluation of its effects.
- The official predictions of the Ministry of Finance were adopted regarding the average employment in the national economy in 2003 as 8,643,000 persons.
- The official predictions of the Ministry of Finance were adopted regarding the average salary in the national economy in 2003 as PLN 2,021 (gross).

Given the availability of data, the analysis was conducted on average values. It should be noted that the results are approximate. When using average values, it is impossible to consider many aspects of the problem, e.g. the effect of the changes proposed on persons conducting economic activities and paying their taxes within the PIT scheme, changes in the thresholds of tax brackets etc.

The table below shows the financial effects of reductions in social security contributions by 0.5% for the employee and the employer.

Table 8

Financial effects of reductions in social contribution rates

PLN million

Reduction in payments to social security funds (together)	- 2,3
Increase in incomes from Personal Income Tax	+ 0,2
Together	**- 2,1**

Source: estimated according to data of the Ministry of Finance

As a result of the changes introduced, the labour costs in 2003 will be reduced on a macro scale by **PLN 1.1 billion** (under the assumptions made for the level of employment and the average gross salary). It is essential to determine the employment effect. The extent of response from enterprises to such a reduction in their employment costs may vary depending on a large number of external factors, such as the expected economic growth, political factors or confidence in the sustainability of the systemic changes proposed. The elasticity of the labour market is also important, as it is determined for the most part by relevant regulations on employee hiring and dismissal. It seems that in order to maximise the employment effect it would be well-advised to make parallel amendments to the Labour Code to make this market more elastic. Two scenarios were considered as alternatives. In the first scenario it is assumed that 50% of resources saved by enterprises as a result of lower labour costs would produce additional employment. In the second scenario it is assumed that the reduced labour costs as a whole would produce additional employment.

Under these assumptions, in 2003, in the first scenario changes in labour costs will produce an additional 18,000 jobs. In the second scenario, it is assumed that employment will grow by 36,000 jobs.

Table 9

Financial effects of the additional employment on the sector of public finance

PLN billion

Financial effect	**Scenario I**	**Scenario II**
Additional incomes from pension insurance contributions	0,1	0,2
Disability insurance	0,05	0,1
Health insurance, accident insurance, Labour and Guaranteed Social Benefits Fund	0,03	0,06
Additional incomes from PIT (together with contributions to National Health Fund)*	0,06	0,12
Additional incomes from Corporate Income Tax	0,1	0
Additional incomes total	**0,25**	**0,5**
Total financial effect on the public finance sector (after addressing shortages resulting from decreases in social insurance contribution rates)	**- 1,8**	**-1,6**

* Higher incomes mean higher revenues to self-governments. This analysis covers these revenues for the sector of public finance as a whole, e.g. revenues of the State budget as well as the revenues the sector of non-governmental units. The same applies to the Corporate Income Tax.
Source: calculated using the data from the Ministry of Finance.

This simulation indicates that depending on the assumptions adopted for the employment effect, the expected financial result of 0.5% reduction of the rates for the employer and the employee will vary between minus PLN 1.6 billion and minus PLN 1.8 billion. By principle, this reform must not cause a net effect for the public finance sector. The additional revenues to the sector as a result of increased employment are incommensurably lower than the losses caused by lower social insurance rates. Therefore, it becomes necessary to raise taxes in order to compensate for this loss.

It was assumed that this loss would be offset by additional excise tax revenues. On the environmental grounds, higher taxes on motor fuels and electric energy were considered. It was assumed that for political and social reasons it was now impossible to levy tax on hard coal. The table below shows the estimated changes in the excise tax rates on motor fuels and electric energy which would offset the losses of the public sector caused by lower pension insurance contributions.

The changes proposed in the excise tax were presented as two options. In the first option (higher increase), it was suggested that only the excise tax on motor fuels or only the excise tax on electric energy would be raised (assuming that only one tax would be raised). In the second option, it was assumed that the excise tax on electric energy would grow by 1 grosz (0,01 PLN) per kWh and the mean annual dynamics of the excise tax on fuels was calculated to determine the dynamics necessary to produce revenues which may, along with the additional revenues from the excise tax on motor fuels, offset the negative effects of changes in the insurance system. In both options, it was assumed that the dynamics of sales of motor fuels and electric energy would be negative (minus 5%) as a result of the increases in excise taxes and the related price increases.

Table 10
Mean annual increases in excise tax rates

Specification		Scenario I	Scenario II
Alternative I	Motor fuels	12,7%	11%
	or		
	Electric energy	75,4%	65%
Alternative II	Motor fuels	4,3%	2,6%
	Electric energy	1 grosz (0,01 PLN) / kWh	1 grosz (0,01 PLN) / kWh

Source: estimation using the data from the Ministry of Finance.

The limitations of the analysis and the possible threats to EFR

This analysis is approximate, but this does not mean that its results are not credible. It will be possible to conduct more exact simulations after more precise data have been obtained from the tax system. For 2003 and 2004, they are not available yet with the required level of detail.

The simulation assumed that the tax burdens on labour revenues would be changed and that the excise tax rates on motor fuels and/or electricity would be raised. These products are staple commodities and increases in their prices may cause negative economic and social effects, including in particular:

- higher costs for enterprises,
- higher costs of living (this will have the worst effect on the retired people who will not enjoy any financial gains, since they do not pay pension contributions),
- inflation pressure (cost pressure and pressure for salary increases) and the threat that the National Bank of Poland may begin to pursue more rigorous monetary policy.

It should be noted that the analysis was conducted for a short term. It does not consider at all the effect of changes in the pension system in the long term. Therefore, when considering whether the solution proposed should be adopted, it would be necessary to take into account the long-term effect of lower pension contributions on the social insurance system as this may significantly change the results of the analysis.

Conclusions

The extensive information presented in this Study on the Polish fiscal system and on the condition of public finance in Poland in 2002-204 as well as on the economic, social and environmental conditionalities of the financial policy in this period indicates the need to use the Environmental Fiscal Reform as an instrument to mobilise resources for environmental purposes, technical and technological innovations in production and consumption as well as for development and employment generating purposes in the sector of enterprises, to be gained as a result of reductions in social insurance rates and other employment-related burdens. In the current situation, it would be beneficial to incorporate the Environmental Fiscal Reform into the comprehensive reform of public finance, as an instrument to stabilise and catalyse structural changes in the area designated, i.e. the revenues from the sales of fuels,

energy and natural resources as well as those from environmental fees and fines and their expenditures for development, environment and employment related purposes. To some extent, EFR may be used in Poland to gradually phase out environmentally harmful direct and hidden subsidies to the consumption of natural and environmental resources.

The shape and extent of this reform remains an open question. This Study presented two concepts of the Environmental Tax Reform (i.e. the version of EFR which does not include reductions in subsidies) and their effects on the State budget in Poland. Their range and the potential for fiscal shifts are relatively slight, since the authors tried to choose options which are realistic in the current social and economic situation, being aware of the existing political barriers and the certain reluctance of some politicians, Members of Parliament, entrepreneurs and trade unions to accept such changes as go too far in their opinions. The two concepts proposed are indeed an illustration of what could now be done in Poland rather than what we would like to do within the framework of a comprehensive reform of public finance.[31]

It is also necessary to bear in mind the measures of the Government's fiscal policy as presented in this Study. Indeed, these measures are a step towards the active use of the tax system to achieve environmental and employment generating goals. They include e.g. the programme implemented since 2002 to reduce labour costs by cutting the corporate income tax (CIT) rates and the reductions to be introduced in 2004 in the tax rates for natural persons (PIT) who conduct economic activity. Similar goals will also be served by the shift in 2004 of a substantial part of the State budget revenues to local government budgets, which would provide them with resources enabling them to take independent decisions in many economic and social fields. These steps would not replace the fiscal effects arising from the implementation of EFR, particularly as regards the coupling of environmental effects and the employment effects caused by lower social costs of labour.

Irrespective of the outcomes of a political discussion or only consultations within the range of the Government and the interested social partners on the Environmental Fiscal Reform and environmental taxes in Poland, studies and research are likely to continue on the development of the concept of EFR and its implementation as well as on the creation of political support for its adoption by the Government and Parliament. In this respect, it will be useful to continue environmental fiscal reforms and the use of environmental taxes already launched in the European Union Member States and the applicant countries. A public debate should decide whether it is in Poland's interest to belong to a group of countries leading in the shaping and implementation of environmental policies, including the environmental fiscal reform and tax instruments. The conduct of such a debate will depend on the Government, political parties, local governments, social groups, including local communities and non-governmental organisations. Their determination will decide whether, to what extent and when the concept of EFR will be implemented in Poland.

[31] Work on the Environmental Fiscal Reform is conducted by the Team preparing the concept of the economic instruments of environmental policy as appointed by the Minister of the Environment in the first half of 2003 and is expected to be finalised in the second quarter of 2004.

Recommendations for the adjustment of the State budget in Poland in 2003 and 2004

1. Given the current condition of the public finance sector, the State budget could be "greened" to a meaningful extent only by the implementation of the Environmental Fiscal Reform, which would allow for a systemic coupling of the environmental benefits ensured by increases in the prices of certain fuels and energy carriers with the benefits on the labour market produced by lower labour costs due to reductions in contributions to regular and disability pension insurance.

2. The cited data indicate that the financial base for the Environmental Fiscal Reform should be taxes levied on selected fuels and energy carriers, since it is the only way to ensure fairly stable offsetting over several years of the shortages in the State budget caused by reductions in insurance contributions by revenues from higher taxes.

3. From the point of view of the real possibilities of the implementation of EFR, the most favourable EFR option is the one which covers several basic fuels and energy carriers as well as a wide range of taxpayers, including both the sector of enterprises, the budget-supported sphere and households. As demonstrated, any concentration of tax increases on selected fuels and energy carriers as well as the narrowing of the payers' group can lead to relatively high price increases and will, therefore, give rise to strong resistance.

4. The timeframe of EFR should be subject to negotiations between the Government and social partners. Although, following the example of the EFR implemented in Germany, a timeframe of 4 years is recommended, in the case of Poland, one of the applicant countries which are now subjected to severe systemic discipline and adaptation to the conditions of a new political system and market-based economy, the option of a step-like reform should be pursued, i.e. one lasting 2 to 3 years, each time extended and adjusted depending on the extent to which the convergence criteria have been met.

5. The Environmental Fiscal Reform should be strictly co-ordinated with the comprehensive reform of public finance, the assumptions of which still continue to be discussed in Poland. It is also indispensable to couple it with a reform of the economic instruments of the national environmental policy. In the next few years, this area of public finance - mostly based on environmental fees and fines and the only just introduced system of product charges and environmental deposits - will be the main source of the Polish matching funds for the implementation of environmental projects within the framework of the Structural Funds and the Cohesion Fund.

6. Although it does not seem possible to make any larger adjustments to integrate the environmental criteria into the State budgets for 2003 and 2004, certain suggestions in this respect may be specified for 2005 and 2006, based on the estimates made exactly for the State budgets in these years.

7. In designing the structure of EFR as an instrument to green the State budget in the successive years, each time consideration should be given to the course of the reforms of social insurance systems and mechanisms now debated in Poland and the other European Union countries. A substantial reform of the regular and disability pension system may have a dramatic effect on the purposes and scope of EFR. This also applies to adjustments of the system of direct taxes: corporate and personal income taxes, as they may also determine the scope and scale of the implementation of EFR.

Annex 1

Table

Basic macroeconomic indices in Poland in the years 2000 – 2004

Specification	Units	2000 performed	2001 performed	2002 performed	2003 expected	2004 forecast
Real processes						
GDP	**%**	**104,0**	**101,0**	**101,4**	**103,5**	**105,0**
GDP in current prices	PLN billion	713,4	750,8	772,2	805,1	861,5
Prices						
Price indices of consumer goods and prices (yearly average)	**%**	**110,1**	**105,5**	**101,9**	**100,8**	**102,0**
Price indices of sold production of industry (yearly average)	%	107,8	101,6	101,0	102,0	101,7
Wages and salaries						
Average monthly gross average wages and salaries in national economy, of which	PLN	1 894	2 045	2 133	2 201	2 290
in corporate sector	PLN	2 057	2 203	2 277	2 331	2 416
Average monthly gross nominal retirement pay and pension						
- from non-agricultural social security system	PLN	875	972	1 039	1 091	1 126
- farmers	PLN	602	664	700	726	740
Labour market						
Average employment in national economy:	thous.	9 354	9 050	8 778	8 643	8 733
Average number of retirees and pensioners	thous.	9 412	9 311	9 237	9 205	9 163
Unemployment rate	**%**	***15,1***	***17,5***	***18,1***	***18,4***	***17,8***
Exchange rate						
- PLN/EUR (average in the period)	PLN	4,01	3,67	3,86	4,31	4,25
Interest rates						
Interest rates nominal						
- open market operations (average in the period)	%	17,9	15,9	8,8	5,6	3,7
Balance of payments						
Current account	USD million	-9 952	-7 166	-6 700	-6 500	-8 400
- foreign direct investments	USD million	8 169	6 928	3 789	4 300	5 150

Source: the Act on the State for 2004. Justification. Council of Ministers. Warsaw. September 2003 p. 361.

Annex 2

Table

Investment outlays on environmental protection and water management (current prices)

PLN million

Specification	**2000**	**2001**	**2002**	**2003**
Environmental protection total	**6 570,3**	**6 168,9**	**5 027,1**	**n.a.**
Protection of air and climate, of which:	2 417.8	2 157,3	1 485,4	n.a.
• outlays on modern fuel combustion technologies as well as the modernization of boilers and thermal energy plants	882,1	1 077,0	818,3	n.a.
Waste water management and protection of waters, of which:	3 341,2	3 277,3	2 833,6	n.a.
• municipal waste water treatment	1 161,8	1 205,5	790,5	n.a.
• sewerage treatment for the transport of waste water and waste water basins	1 902,2	1 782,7	1 844,5	n.a.
• closed circulation systems water supply	45,8	5,9	5,7	n.a.
Waste management, protection of soils and underground waters	650,6	463,9	573,1	n.a.
Protection of nature, landscape and biodiversity	4,0	6,7	4,2	n.a.
Noise and vibration reduction	47,3	31,5	3,4	n.a.
Water management	**1 652,7**	**1 315,1**	**1 440,1**	n.a.
Water intakes and systems	851,8	675,7	681,0	n.a.
Water treatment plants	196,8	168,1	217,6	n.a.
Share in investment outlays in the national economy in %				
Environmental protection	4,9	5,1	4,6	n.a.
Water management	1,2	1,1	1,3	n.a.
Share in Gross Domestic Product in %				
Environmental protection	0,9	0,8	0,7	n.a.
Water management	0,2	0,2	0,2	n.a.

Source: Statistical Yearbook. Environmental Protection 2003. Table 397, p. 377.

Annex 3

Table

Some tangible effects of investments in environmental protection and water management in the year 2000-2003

Specification	Unit of measure	2000	2001	2002	2003
Environmental protection					
Waste water treatment plants (facilities), of which:	X	**324**	**262**	**197**	**n.a.**
• biological	X	135	129	119	n.a.
• with enhanced nutrient removal	X	40	25	29	n.a.
capacities of treatment plants total	dam^3/24h	1098	642	396	n.a.
• biological	dam^3/24h	405	173	164	n.a.
• with enhanced nutrient removal	dam^3/24h	364	312	202	n.a.
Ability of commissioned system to					n.a.
• reduce particulate pollutants	thous. ton/a.	170.3	66,5	17,1	n.a.
• reduce gaseous pollutants	thous. ton/a.	176,3	64,3	9,0	n.a.
• treatment waste	thous. ton/a.	870	838	614	n.a.
• manage waste	thous. ton/a.	746	437	493	n.a.
Waste dumps, sludge lagoons and discharge ponds for industrial and municipal wastes	ha	126	114	76	n.a.
Reclamation of areas used for depositing waste	ha	77	72	56	n.a.
Sewerage system collecting:					
• waste water	km	4 758	4 210	5 012	n.a.
• rainwater	km	343	437	355	n.a.
Water management					
Capacity of water intakes	dam^3/24h	301	139	173	n.a.
Water purification	dam^3/24h	173	111	101	n.a.
Water supply system	km	7 837	6 381	6 582	n.a.

Source: Statistical Yearbook. Environmental Protection 2003. Table 398, s. 377.

Annex 4

Table

Result of the State budget and State public debt in relation to Gross Domestic Product

PLN current prices

Specification	2002 performed	2003 planned	2004 forecast
Gross Domestic Products (PLN billions)	**772, 2**	**805,1**	**861,5**
Revenue of the state budget	**18,6%**	**19,1%**	**17,7%**
Expenditure of the state budget	**23,7%**	**24,0%**	**23,0%**
State budget result (deficit) in % of GDP	5,1%	4,9%	5,3%
State public debt, of which	**45,8%**	**49,1%**	**53,0%**
debt of State Treasury	45,4%	46,5%	49,4%
Domestic	30,4%	31,4%	35,1%
Foreign	15,0%	15,1%	14,3%
Debt of the governmental sector entities	**43,8%**	**46,8%**	**50,6%**
Debt of non-governmental sector entities	**2,0%**	**2,3%**	**2,4%**

Source: Report on the realization of the State budget from January 1 to December 31 2002. Commentary. Vol. I. Council of Ministers. Warsaw 2003; Act on the Budget for 2003. Justification. Council of Ministers. Warsaw September 2002; Act on the Budget for 2004.Justification. Council of Ministers. Warsaw September 2004.

Annex 5

System of environmental fees and fines

The system of environmental fees and fines in Poland includes the following:

- the fees and fines provided for in the Environmental Protection Act (these are the fees for the releases of pollutants into the air as a result of the activities conducted, the landfill of waste, the withdrawal of surface and ground waters and the discharge of wastewater into waters or to land)*,
- the fees provided for in the Water Act are economic instruments serving the purposes of water management, including payments for the use of waterways and the fees for the usufruct of fishing districts,
- the fees and fines provided for in the Nature Conservation Act are collected for the removal of trees and shrubs from real estates,
- the fees provided for in the Geological and Mining Law are usually collected in the form of charges for mining usufruct, royalties for operations and other charges for activities covered by concessions as well as activities other than abstraction which are

conducted without the required concession or in flagrant violation of the conditions of the concession,

- the fees provided for in the Act on the Protection of Farmland and Forestland are collected from the persons to whom the local councils have granted consent for the conversion of farmland and forestland to uses other than farming and forestry**,
- the product and deposit charges provided for in the Act on Economic Operators' Obligations in the Scope of Managing Certain Types of Waste and on the Product and Deposit Charges***,
- the charges provided for in the Act on the Sanitation and Order Keeping in Communities are paid for the collection of municipal waste from real-estate owners or for the emptying of septic tanks and the transport of liquid waste by specialised organisation units or authorised operators,
- the charges and fines provided for in the Act on Public Water Supply and Public Wastewater Collection are collected by water and wastewater companies for the water supply and wastewater collection from residents for the services rendered, on the basis of the rates and tariffs agreed with the local governments.

* This Act also provides for increased fees where users of the environment fail to meet the requirements laid down in environmental legislation as well as administrative fines imposed where the conditions for the use of the environment are exceeded or violated.

** The revenues form payments and charges for the conversion of farmland to non-farming uses go to the Fund for the Protection of Farmland; those for the conversion of forestland to non-forestry uses, respectively, to the Forest Fund.

*** This Act imposes on entrepreneurs and importers the obligation to recover waste, including packaging and post-consumer waste. They are required to achieve recovery levels which are laid down each year by a Regulation of the Minister of the Environment. Product charges are imposed on those entrepreneurs and importers who fail to achieve the required waste recovery and recycling levels. In turn, the deposit charge applies to lead accumulators. The revenues of the Environmental Funds from product and deposit charges in 2004 are estimated at about PLN 20 million.

Annex 6

Fiscal incentives complementing the system of environmental fees and fines

Within the system of fiscal policy instruments, Poland uses tax preferences, depreciation allowance systems as well as allocations and subsidies encouraging economic entities and other users of the environment to take measures saving the environment and its resources. The tax preferences related to environmental protection take the following forms:

- exemptions and abatements of personal and corporate income taxes
- exemptions and abatements of VAT rates
- differentiation of excise tax rates and exemptions from excise tax
- exemptions and abatements of local taxes (real-estate, forest and farmland taxes).

They are laid down in relevant Acts, including:

- the Act on Corporate Income Tax (CIT),

- the Act on Personal Income Tax (PIT),
- the Act on the Value Added Tax and the Excise Tax,
- the Act on Real-Estate, Farmland and Forest Taxes.

The systems of accelerated depreciation are addressed to economic entities which invest in environmental controls and advanced technologies and which develop cleaner production systems.

Allocations and subsidies to activities take the form of credit or loan and fiscal preferences designed to encourage the use of production technologies and the launch of production by companies as well as to prevent the adverse effects of consumption and product use by the public sector and households.

Annex 7

Table

The structure of the State budget incomes in the years 1999 – 2004 with special regard to excise tax as a component of total incomes

Specification	1999 performed	2000 performed	2001 performed	2002 performed	2003 planned	2004 forecast
Incomes total (PLN million), of which:	**125 922,2**	**135 663,9**	**140 526,9**	**143 527,0**	**155 697,7**	**152 750,1**
1. Tax incomes	89,6%	88,2%	84,8%	89,7%	89,0%	88,4%
Indirect tax, of which:	59,2%	58,7%	58,7%	62,4%	62,2%	67,5%
excise tax	**20,0%**	**20,1%**	**20,5%**	**21,9%**	**22,1%**	**22,7%**
Direct tax (PIT and CIT)	30,3%	29,5%	26,1%	27,3%	26,8%	20,8%
2. Non-tax and foreign incomes	10,4%	11,8%	15,2%	10,3%	11,0%	11,6%

Source: Data from the Ministry of Finance.

Annex 8

Table

State budget expenditure by divisions in 2002 – 2004

Specification	2002 per-formed	2003 planned	2004 forecast
Expenditure total of which:	**182 922,5**	**193 380,1**	**198 250,5**
Agriculture and hunting	1,68%	1,94%	1,38%
Mining and quarrying	**0,55%**	**0,53 %**	**1,12%**
Manufacturing	0,16%	0,17%	0,06%
Trade	0,42%	0,46%	0,46%
Transport and telecommunication	2,67%	2,53%	2,11%
Tourism	**0,020%**	**0,022%**	**0,019%**
Dwelling economy	1,17%	1,00%	0,91%
Service activity	0,33%	0,32%	0,20%
Informatics	**0,06%**	**0,076%**	**0,077%**
Science	1,46%	1,41%	1,41%
Public administration	**3,61%**	**3,36%**	**3,83%**
National defence	5,14%	5,21%	5,71%
Compulsory social security	**28,9%**	**27,6%**	**23,76%**
Public safety and fire care	4,34%	4,33%	4,24%
Administration of justice	2,79%	3,03%	3,23%
Public debt servicing	**13,2%**	**13,5%**	**14,6%**
Education	1,09%	0,76%	0,49%
Higher education	**3,75%**	**3,67%**	**4,04%**
Health care	1,96%	1,84%	1,72%
Social welfare	**8,46%**	**5,53%**	**4,65%**
Educational care	0,17%	0,14%	0,13%
Municipal economy and environmental protection	**0,41%**	**0,27%**	**0,07%**
Culture and national heritage	0,44%	0,46%	0,47%
Botanic and zoological gardens and natural areas and objects of nature conservation	0,05%	0,043%	0,042%
Physical education and sport	0,07%	0,077%	0,069%

*Act on the Budget of the State for 2003 planned the expenditures at PLN 193, 496.0 million.
Source: Report from realization of the State budget from January 1 to December 31 2002. Commentary. Vol. I. Council of Ministers. Warsaw 2003; Act on the Budget for 2003. Justification. Council of Ministers. Warsaw September 2002; Act on the Budget for 2004.Justification. Council of Ministers. Warsaw September 2003.

Annex 9

Table

Revenue and expenditure of appropriated state funds in 2002 – 2004

PLN million

Specification	**2002 performed**	**2003 planned**	**2004 forecast**
Appropriated state funds total			
Revenue of which	126 299,9	132 040,1	136 397,6
allocations from the state budget	47 443,9	48 293,9	40 752,8
Expenditure	130 680,6	134 344,6	140 036,8
Social Insurance Fund			
Revenue of which	102 776,0	101 927,7	106 598,8
allocations from the state budget	26 987,9	27 967,4	20 916,0
Expenditure	99 013,2	102 186,7	107 260,6
Pension Fund			
Revenue of which	16 406,0	16 024,2	16 119,3
allocations from the state budget	15 390,0	15 013,9	15 065,7
Expenditure	16 402,3	16 006,4	16 270,6
Labour fund			
Revenue of which	9 276,0	9 763,7	8 964,0
allocations from the state budget	3 634,6	3 944,0	3 144,0
Expenditure	9 807,0	11 780,8	11 128,9
Alimony Fund			
Revenue of which	1 486,0	1 446,5	1 723,6
allocations from the state budget	1 316,4	1 249,2	1 535,0
Expenditure	1 492,8	1 452,4	1 728,9
State Fund for Rehabilitation of Disabled People			
Revenue of which	1 632,4	1 531,3	2 109,0
allocations from the state budget	-	-	750,0
Expenditure	1 420,9	1 556,8	2 979,9
Veterans State Fund			
Revenue of which	88,1	90,0	62,0
allocations from the state budget	88,0	90,0	62,0
Expenditure	171,3	168,3	16,0
Administrative Fund			
Revenue of which	461,5	466,0	471,5
allocations from the state budget	-	-	-
Expenditure	461,0	486,8	484,7
National Fund for Environmental Protection and Water Management			
Revenue of which	843,3	804,0	742,0
allocations from the state budget	-	-	-
Expenditure	730,2	903,8	658,8
Central Agriculture Land Protection Fund			
Revenue of which	18,5	16,9	17,2
allocations from the state budget	-	-	-
Expenditure	18,0	16,9	17,2
Prevention and Rehabilitation Fund			
Revenue of which	30,7	33,8	34,8
allocations from the state budget	27,0	29,3	29,1

Expenditure	31,0	34,1	35,3
Central Geodetic and Cartographic Resources Management Fund			
Revenue of which	188,1	153,4	158,5
allocations from the state budget	-	-	-
Expenditure	182,1	181,9	182,2
Promotion of Creation Fund			
Revenue of which	0,5	0,8	0,8
allocations from the state budget	-	-	-
Expenditure	0,7	1,0	0,8

Source: Report from realization of the State budget from January 1 to December 31 2002. Commentary. Vol. I. Council of Ministers. Warsaw 2003; Act on the Budget for 2003. Justification. Council of Ministers. Warsaw September 2002; Act on the Budget for 2004.Justification. Council of Ministers. Warsaw September 2003.

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ENVIRONMENTAL BUDGET REFORM IN DENMARK

POLICY PAPER

"MAKING PRICES WORK FOR THE ENVIRONMENT"

This Policy Paper describes an example of a possible Danish environmental related budget reform. The example illustrates a marked shift to taxing the use of resources and polluting behaviour instead of e.g. the taxing of labour – fully implemented in 2010.

Environmental Budget Reform in Denmark

Text: Søren Dyck-Madsen – The Secretariat of the Danish Ecological Council

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The Proposal can be read on the website of the Danish Ecological Council: www.ecocouncil.dk and is downloadable free of charge.

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The Proposal for a Danish Environmental Tax Reform from The Danish Ecological Council

The Ecological Council has drawn up a proposal for at Danish Environmental Tax Reform, that fully implemented in 2010 will double the percentage of the total Danish tax revenue, that is coming from Environmental taxes.

The aim of the full proposal is to give an example of a change in the tax system in a more environmental friendly direction without changing the social distributional effect in society, without raising the tax and without disturbing the competitiveness in the Danish industry

Environmental taxes should be used, where they are the most effective instrument for easing or solving environmental problems. Therefore we only propose new taxes or adjustment of existing taxes, where it's effective for solving or lowering an environmental problem, which is suitable to be solved using economical instruments such as levies and taxes.

Environmental taxes of course gives revenues. Some times Environmental taxes are accused for being implemented just for the revenue, just to heighten the tax pressure. The proposal from the Danish Ecological Council shows that it doesn't have to be like that. The revenue from environmental taxes can be used to reduce other forms of taxation, especially income taxes, and that can be done in such a way, so that the complete proposal doesn't affect low income heaviest and doesn't spoil industrial competitiveness.

Some times environmental taxes are also accused of the opposite: When the purpose of environmental taxes is to limit the environmental problems and the use of natural resources, then environmental taxes undermine their own tax base and therefore they cannot be used as a stabile means of financing the public expenditures. Such a critic is overshooting the mark. We will continue to use resources and energy, we will continue transport our selves and goods around in society and we cannot exist without producing a certain amount of waste. The tax base will therefore not disappear, but the environmental taxation shall bring it down to a sustainable level.

What is a sustainable level? On far most areas neither science nor others can give a final and clear answers to that question. But we do know the direction and the use of environmental taxation will send a clear signal to both consumers and producers about that direction. That signal is crucially for their long-term planning and therefore also for the possibilities to ensure, that environmental problems will be solved in the most economically efficient way.

The proposal from the Danish Ecological Council is an example of such clear signals in a number of areas, where it is clearly documented, that we have to improve considerable comparing with today. What is actually a sustainable level and how big the environmental taxes have to be will at any times be a political question, which have to be decided taking the actual knowledge into consideration and the targets must be adjusted along with the improvement of that knowledge.

The Danish Ecological Council has in the proposal primarily focused on the use of environmental taxes to help solving environmental problems such as climate change, air pollution and undesired chemicals, but also according to tap water supply, solid waste production, waste water and the overuse of resources. At the same time we have pointed out areas where

subsidies makes environmental problems bugger. A reorganizing or removal of these environmental perverse subsidies will both benefit the environment and save public finances.

We have divided our proposal in two parts – Household and industry. When environmental taxes are imposed on household, the revenue from those taxes is reversed to households, mainly by lowering income taxes. The same is done for industry where the revenue mainly is reversed as subsidies for environmental positive arrangements e.g. energy savings and as contributions according to the labour expenditures for in that way to lower the costs of labour. The proposals to raise the level of existing environmental taxes is concentrated around energy use, transport and the use of hazardous chemicals, because there areas is the main cause of many environmental problems.

The proposal moves all in all a little less than 60 billion Dkr. in tax revenue from mainly income taxes to taxation of resource use and pollution. Of course we are talking about a qualified estimate because on most areas we haven't got sufficient knowledge about how consumers and producers will react on the actual level of a certain environmental tax. A systematic collecting of knowledge in this area should be an integrated part of an environmental tax reform. The 60 billion Dkr. will make up 9% of the total tax revenue in 2010, so everything else equal the total revenue from environmental taxation in 2010 will make up about 18,5% of the total tax revenue. All figures are in fixed 2001 prices.

Proposal for a Danish Environmental Tax Reform 2002 to 2010:

Taxing Carbon emissions from flaring from oil platforms	+ 0,3
Increase tax on extraction of oil and natural gas in the North Sea	+ 3,7
Increase taxes on Petrol and diesel	+ 1,0
Introduce road pricing differentiated according to environmental performance of cars	+ 10,8
Increase steps in the environmental car owner tax (steps moved 5 km/litre)	+ 2,0
Increase registration tax for energy ineffective cars	+ 1,0
Increase carbon tax	+ 3,8
Phase out rebates on carbon tax for energy extensive industry	+ 1,7
Lower rebates on carbon tax for energy intensive industry	+ 1,9
Increase energy tax for electricity in households	+ 6,3
Increase energy tax for oil, coal and natural gas in households	+ 8,5
Increase tax on pesticides	+ 0,1
Industry pays full tax on piped water	+ 0,7
Increase tax on chlorinated solvents	+ 0,0
Tax unwanted chemicals	+ 3,0
Tax fuel for airplanes and ferries/ships	+ 5,3
Increase tax on solid waste	+ 0,7
Increase tax on waste water	+ 0,5
Tax advertising, e.g. handouts, fliers, commercials, brochures	+ 4,0
Increase tax on PVC and phthalates	+ 0,1
Tax high pressure treated wood and timber	+ 0,0
Remove tax rebates for transport to job	+ 2,0
Reorganize or remove subsidies for agriculture	-
Remove subsidies for energy based on fossil fuels or nuclear	-
More jobs and a broadened tax base gives an effect	-
Savings in expenditures for environmental damage	-
Reduce the rate of ordinary income tax low bracket from 5,5 % to 1,0 %	- 30,3
Increase the income tax threshold with 5.000 DKK	- 8,0
Reduce the VAT on organic food products and ecolabelled products	- 2,0
Social compensations by increasing child allowances, educational aid, retired peoples pensions and other social allowances	- 6,0
Compensation to industry according to labour expenses	- 6,2
Funding for introducing cleaner technology	- 2,5
Changing taxation and write offs for environmental friendly investments	- 1,5
Increase investments in railway, tram, metro, bus light rail	- 1,0
Tax diesel vehicles without particle filters – Reverse for installation of filters	Neutral
Tax fuel use for Public transport – Reverse as subsidy for labour costs for drivers	Neutral
Tax energy extensive electrical appliances and subsidy energy effective appliances	Neutral

All figures are in billion DKK. (2001 - price level)

A Comprehensive Environmental Budget Reform is Possible

The Danish Ecological Council wishes with this report to visualize the possibility and the necessity for the use of economic instruments, especially a environmental tax reform or a environmental budget reform, to ensure a more sustainable development including a clearly improved environment.

Numerous surveys and statements from universities and researchers, governments, EU and OECD support the truth in this point of view.

We also want to present an example of how such an environmental budget reform could look, if the revenue from existing and new green taxes is increased, if environmental damaging subsidies are removed or reallocated and if all the increased revenue is used to reduce the bottom tax, to increase the tax free income allowance, to compensate low incomes by increasing some social benefits, to reverse the extra expenses for industry according to the labour cost and to subsidise implementations of energy effective and cleaner technology.

An environmental budget reform will have the following benefits:

- Significant improves of the environment by reduced use of natural resources and reduced pollutive emissions.
- The public pressure of taxation doesn't increase
- Social income distribution is not affected (No extra burden on low incomes)
- Industries competitiveness is not affected in negative direction
- Number of jobs is not affected in negative direction – more likely the opposite
- Furthermore it can be foreseen, that Danish industry's opportunity for development and export of energy effective products will be strengthened

We do propose a tax change in the period of 2002 to 2010 together with a removal or reallocation of environmental perverse subsidies in the same period.

We underline, that the proposal only is estimated roughly, as well as the mentioned changes in behaviour that improves the environment also only is estimated roughly. The Danish Ecological Council doesn't have the capacity to do the often very complicated calculations of revenues and distributional effects, also because of the lack of knowledge on many of the areas.

Principles for Choosing Environmental Taxes, Removal of Environmental Perverse Subsidies and the Matching Reversals and Compensations

Environmental tax or budget reform can of course be put together in numerous ways.

- The Danish Ecological Council has chosen a number of characteristic areas of environmental policy such as energy, transport and hazardous chemicals. In these areas there will be marked improvements of the environment using economic instruments, and at the same time the use of economic instruments such as taxes will create a considerably revenue that creates the possibility to reduce other taxes.

- We have chosen only to calculate the removal of one of the environmental perverse subsidies, namely the tax rebates for transport. We call attention to the existence of other environmental perverse subsidies such as subsidies to intensive agriculture and energy based on fossil fuels or nuclear. These have to be abolished as soon as possible. That concerns the EU subsidies for agriculture, that hinders third world countries access to EU markets and makes it economically positive overuse both pesticides and fertilizers thereby damaging the environment.

- In the present proposal we state for sure, that the social distribution from the total tax system won't be changing as a result of the environmental tax reform. It is also our intention that the total pressure from taxes will not be changed. Therefore we propose, that the reversion of the increased revenues must be done by reducing the low bracket of the ordinary income tax, increase of the income tax threshold and on top of that to make smaller necessary adjustments in the social welfare system.

- The principles for industry are that industry, as a whole will not loose competitiveness. The increased expenses for environmental taxes is compensates by giving subsidies according to the labour cost in each company and by subsidising energy saving activities and cleaner technology in the companies. It is obvious that the more such a environmental tax reform spread across Europe or countries close to Denmark, the less effect on industrial competitiveness especially for energy intensive industry we will see.

On this background we find, that the present proposal for an environmental tax reform do not conflict with the basic principles in the tax policies of neither the Government nor the opposition. It is consistent with the tax stop declared by the Government, where it's actually stated in the governments declaration from November 2001, where it is stated, that tax changes can be introduced, also using environmental taxes, as long as the total increased revenue is reversed completely by reducing other taxes. See quotation page 20.

OECD and EU-Commission Recommend the Use of Economic Instruments in Environmental Policy

On international and national levels there are an increasing attention and recommendation for increased use of economic instruments to obtain a more sustainable development. In these recommendation the implementation of environmental tax reforms is central.

”Moving the sectors and issues of energy, climate change, transport and air pollution out of the ”red lights” category will require a comprehensive policy package. Such a package should include a combination of economic instruments (subsidy and tax reform, introduction of new taxes or charges, and wider use of tradable permit systems), a strong regulatory framework (particularly for setting air quality targets or standards) the promotion of voluntary or negotiated agreements, and the use of information-based policy tools to encourage more sustainable energy consumption and production patterns”.

”This *Outlook* outlines ”policy packages” or combinations of instruments – regulatory, economic and others – that can be used to tackle many of the most pressing environmental problems. The policy mix suggested here involves the combination of a robust regulatory framework with at variety of other instruments, such as stronger price mechanisms to influence the behaviour of consumers and producers, voluntary agreements, tradable permits, eco-label and information based incentives, land use regulations and infrastructure provision. In particular, The *Outlook* recommends the removal of environmental harmful subsidies and a more systematic use of environmental taxes, charges and other economic instruments to get the prices right”.

Source: ”Highlights of the OECD Environmental Outlook”, OECD 2001

Getting prices right to give signals to individuals and businesses

Getting prices right will encourage changes in behaviour and technology

Market prices have a powerful influence on the behaviour of individuals and businesses. Market reforms to get prices right can create new business opportunities to develop services and products that ease pressure on the environment and fulfil social and economic needs. Sometimes, this means public money for services, which would otherwise not be supplied, such as essential public services in sparsely populated areas. More often, the issue is one **of removing subsidies that encourage wasteful use of natural resources**, and putting a price on pollution. Changing prices in this way provides a permanent incentive for the development and use of safer, less polluting technologies and equipment, and will often be all that is needed to tip the balance in their favour.

Quotation from: KOM(2001)264: ” A Sustainable Europe for a Better World: A European Union Strategy for Sustainable Development, (Commission's proposal to the Gothenburg European Council 15th May, 2001)

"The final and most crucial step is to start pricing energy properly. At the moment, the harm done to human health and the environment from burning fossil fuels is not reflected in the price of those fuels, especially coal, in most countries. There is no perfect way to do this, but one good idea is for governments to impose a tax based on carbon emissions. Such a tax could be introduced gradually, with the revenues raised returned as reductions in, say, labour taxes. That would make absolutely clear that the time has come to stop burning dirty fuels such as coal, using today's technologies".

Source: Editorial from: "The Economist" of 6. July 2002, Page 11.

"Environmentally related taxes have proved to be a powerful tool in environmental policy. Hence an increasing number of OECD countries have undertaken "green tax reforms", with primary objective to protect the environment".

Source: "Greening Tax Mixes in OECD Countries: A Preliminary Assessment". OECD, Oct. 2000.

"The use of economic instruments to promote energy efficiency and modify sustainable consumption patters is essential".

Source: "Report from Regional Roundtable for Europe and North America – 2002 World Summit on Sustainable Development". June 2001

"Environmental taxes can be defined as compulsory payments levied on tax bases deemed to be of particular environmental relevance (OECD, 2001). They help ensure that the market price for a particular product or process reflects its environmental costs more closely, while at the same time creating revenue that can be used to reduce other taxes (e.g. on labour). Imposing environmental taxes can help to reduce the demand for relevant products and processes and the associated pressure on natural resources".

Citat fra: "Environmental Signals 2002" Det Europæiske Miljøagentur, 2002

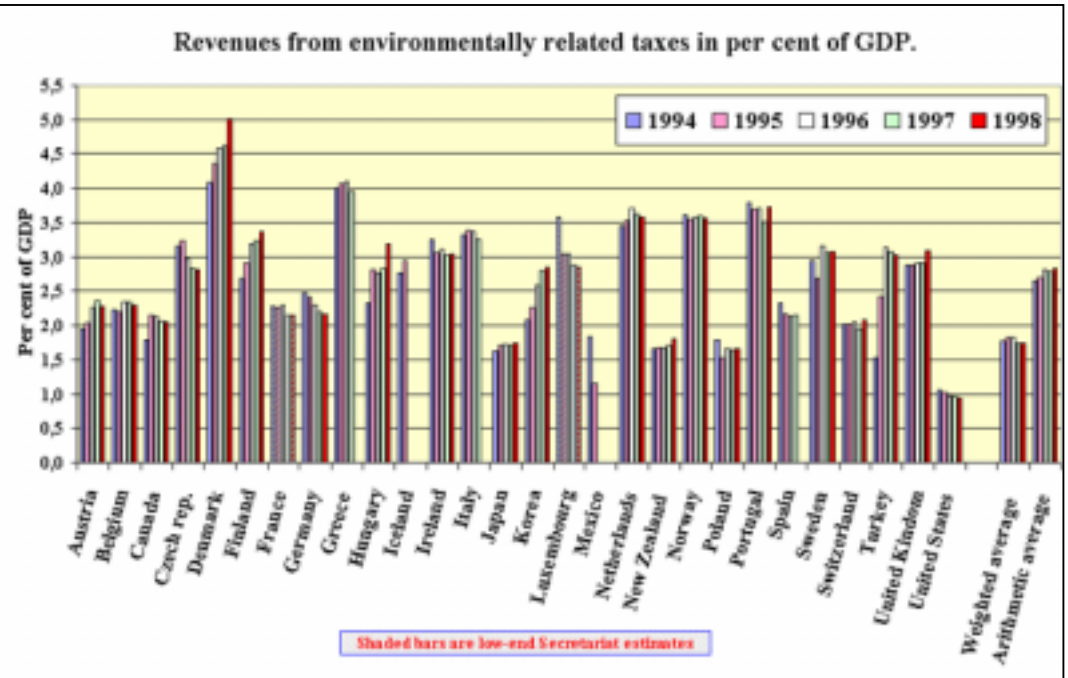
"In the right circumstances, environmental taxes can be highly effective in both cost and environmental terms 6 as the differentiated tax rates on leaded vs. unleaded petrol demonstrated. They also provide incentives for companies to research and invest in more environmentally friendly or less resource intensive technologies (dynamic efficiency). This makes them particularly attractive for problems of a long-term nature".

Quotation from: The Commissions proposal for "The Sixth Environment Action Programme", KOM 82001) 31 final, 24.1.2001

The Danish Situation

Denmark is the country in the World that today has the greatest part of the total tax revenue and part of the GNP coming from environmental related taxes. See the following calculation from OECD.

Despite the relatively high revenue from environmental related taxes there are still more possibilities and benefits by changing the tax system increasing the revenue from taxes on use of natural resources and pollutive behaviour and reducing the revenue from income taxes.



Source: The OECD/EU database on environmentally related taxes.

High Danish income tax level

Denmark is one of the countries in the World that the direct income taxation is the highest share art of the total income. This is because of the Danish welfare model, in which a number of social benefits are paid directly from the revenue from the income taxation. In other countries these costs are paid partly by workers and partly by employers, not affecting the tax bill and partly as a direct payment from the users of the welfare system if not only available in private systems.

On the other hand the remaining available income after taxes and social payments is almost equal in Denmark and Germany.

"The survey shows that the pressure of taxes as a whole is about 15% higher in Denmark than in Germany. On the other hand the Danes get more in return for the tax than the Germans. When you put taxes and social contributions together a single Danish and German industrial worker gets an equal share of their wage, to be used for private consumption"

Quotation from: Jan Plovsing, Danish Statistics September 2002.

This means, that there is an increasing pressure on the Danish tax system to lower the taxation on labour, so that the financing of the Danish welfare model is getting harmonised with especially the majority of the EU members ship countries. The pressure comes from national level from The Economical Council, from industry and from a number of NGO's. On international level the pressure comes from IMF, OECD and the EU that in their yearly evaluations of Danish economy recommends changes in the Danish tax structure, in order to reduce income taxation level.

The Danish Green Taxes
1980- 2002

Tax/ duty	1980	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Duty on energy products	**6.557**	**14.150**	**14.222**	**14.192**	**14.703**	**15.843**	**17.932**	**20.006**	**20.905**	**23.475**	**26.566**	**29.275**	**31.350**	**31.300**
Coal	-	851	892	797	738	592	602	650	703	750	1.143	1.700	1.400	1.550
Electricity	1.213	4.380	4.336	3.938	3.562	4.139	4.482	5.167	5.726	7.525	7.529	7.750	8.000	7.950
Gas	63	39	41	15	43	47	50	45	44	0	0	0	0	0
Natural gas	-	-	-	-	-	-	-	28	37	525	1.345	2.775	4.000	4.075
Oil	1.591	3.136	3.507	3.791	4.749	4.945	5.411	5.897	5.854	5.900	6.674	6.900	7.475	7.225
Petrol	3.690	5.744	5.446	5.651	5.611	6.121	7.387	8.219	8.541	8.775	9.875	10.150	10.475	10.500
Weight duty / Annual ownersh	2.888	4.363	4.547	4.213	4.225	4.268	4.404	4.918	5.172	5.650	6.470	6.925	7.000	7.770
Registration duty	3.049	8.007	8.256	8.532	7.998	13.312	14.967	15.363	16.366	17.800	16.786	14.100	12.900	13.615
Duty on third part liabitiy insur	476	933	894	855	856	894	944	1.068	1.336	1.350	1.430	1.475	1.475	1.625
Road toll	-	-	-	-	-	227	289	262	270	286	296	295	325	325
Eco taxes	**122**	**1.093**	**1.196**	**2.605**	**4.264**	**4.860**	**5.236**	**6.589**	**7.599**	**9.356**	**9.289**	**9.503**	**9.698**	**9.493**
CO_2	-	-	-	1.401	3.177	3.318	3.245	3.693	3.930	4.550	4.515	4.725	4.750	4.924
SO_2	-	-	-	-	-	-	-	296	396	375	481	275	325	100
Disposable tableware	-	74	79	73	69	66	72	59	56	55	60	60	0	0
Certain retail containers and c	100	399	433	462	305	439	479	516	513	900	752	775	950	970
CFC	-	27	13	22	12	5	2	0	0	1	0	1	110	60
Waste	-	404	473	454	529	571	619	601	867	1.000	981	1.000	1.060	1.089
Extraction and import of raw r	16	129	141	140	120	122	136	135	145	150	184	190	190	169
Piped water	-	-	-	-	-	295	652	970	1.279	1.600	1.482	1.700	1.500	1.415
NICd batteries	-	-	-	-	-	-	-	34	35	35	25	25	25	20
Chorinated solvents	-	-	-	-	-	-	-	3	3	5	2	2	2	1
Pesticides	6	60	57	54	52	44	31	282	235	300	445	380	380	365
Waste water	-	-	-	-	-	-	-	-	140	325	314	300	300	285
Antibiotics	-	-	-	-	-	-	-	-	-	35	14	0,5	0,5	0
Phathalates and pvc	-	-	-	-	-	-	-	-	-	-	0	40	75	65
Nitrogen	-	-	-	-	-	-	-	-	-	8	34	30	30	30
Total	**13.092**	**28.546**	**29.115**	**30.397**	**32.046**	**39.404**	**43.772**	**48.206**	**51.648**	**57.917**	**60.837**	**61.573**	**62.748**	**64.128**
Share of GDP in pct.	3,5	3,36	3,39	3,42	3,54	4,1	4,33	4,52	4,58	4,87	5	4,83	4,74	4,58
Share of total tax revenues	7,68	7,09	6,93	6,94	7,04	8,23	8,83	9,19	9,34	10	9,9	9,73	9,46	9,54

Source: The Danish Ministry of Taxation 2002

Increased environmental taxation and reduction of income taxes is recommended

Reduction of income taxation creates a need for increased taxation elsewhere when the level of public expenditures is constant. This can logically be done in several ways, where an increase of taxation of private property is a way that e.g. is recommended of the Danish economic Wisemen.

A balanced increase of the tax revenue from environmental taxes is another way of given possibility for a reduction in income taxes. This way is recommended of a number og national and international organisations such as OECD, The EU-commission and a number of international and Danish NGO's.

> "There is no doubt, that an environmental tax is an effective way to help improve the environment".
>
> "In the coming years the pressure on the financing of the welfare state will increase, because of the demographic development and because of the internationalisation. Increased use of environmental taxes and a sound way ti use the revenue together with increased taxation of land use and other immobile tax objects is from an efficient economical point of view a way to improve environment and the Danish tax system". (Translated from Danish)

Quotation from an article: Grøn skattereform og dobbelt dividende" by the director of the Danish Economic Council Peder Andersen, SØM, June 2002.

> "Danish Prime Minister Anders Fogh Rasmussen (Liberal) will rather lower the income tax on the lowest incomes than remove the "middle" income tax.". (Translated from Danish)

Quotation from: www.Altinget.dk, 9.4.02

> "By ensuring that environmental taxes integrate environmental concerns into sector policies, they can be important tools for sustainable development. This is clearly dependent on the effective implementation of the environmental tax".

Quotation from: "Environmental Signals 2002" European Environmental Agency, 2002

Danish Environmental damaging Subsidies, Rebates and Deductions

In Denmark as in other countries exist a number of subsidies that contribute to environmental damage. Such environmental perverse subsidies exists in different forms: Subsidies or minimum prices can prompt to an overuse of natural resources in production of goods by making it cheaper to harm the environment by using hazardous or scarce substances. Tax rebates for use of resources in environmental questionable behaviour will distort the environmental efficiency. Economical takeover from the State of the problems created by industrial behaviour excludes the internalisation of pollution in the price structure. State paid infrastruc-

ture can prompt to environmental questionable choices of transport. Generally lack of use of the price mechanism by using environmental related taxes will distort the choice in the market, so it will choose more environmental damaging products, production processes and behaviour.

A few examples of Danish environmental damaging subsidies is: Tax rebates for transport to and from job, Deduction in electricity tax for electrical heated houses, Carbon tax rebates for energy intensive industry, Grand fathering of Carbon allowances and more.

”Recent experiences in OECD countries indicate that the reform or removal of many of these subsidies may not only increase economic efficiency and reduce the burden on government budgets and consumers, but can also alleviate environmental pressures – resulting in so-called ”win-win-win” benefits.

Source: ”Environmentally Related Taxes in OECD Countries – Issues and Strategies”, OECD 2001

Distribution of the Danish Tax Revenue in 2000 in billion DKK.

Income tax for the State - "bottom" tax 7%	41,2
Income tax for the State - "Medium" tax 6%	12,9
Income tax for the State - "Top" tax 15%	12,8
Income taxes for communities	121,9
Income taxes for counties	56,9
Tax for ecclaristical affairs	4,3
Employees "labour market" tax	57
Tax on private property	8,5
Tax on pensions savings	12,4
Company tax	30,6
Tax on shareholders earnings	6,4
Social contributions - employees	24,8
Social contributions - employers	4
Other taxes acc. to labour - employers	2,3
Tax on inheritage and gifts	3
Tax on private owned land	13,7
VAT	128,1
Border tax and import tax	2,3
Tax on certain transactions	9,1
Charges for Control, supervision and licens	0,2
Tax on energy use incl. Petrol and diesel	28,5
Transport taxes	22,8
Other environmental taxes	9,3
Tax on gambling	1,4
Excise duties incl. tax on tobacco and alcol	14,8
Charge accordin to labour costs	3,3
Total revenue	632,5

** The lower bracket of the ordinary income tax is reduced to 5,5% in 2002 according to the Environmental tax reform from 1998

Source: Taken from various statements of the total tax revenue from the website of the Ministry of Taxation.

Danish Environmentally Related Taxes Do Work

Danish experiences show that environmental taxes do work. The use of Plastic bags and chlorinated solvents has been reduced remarkably after the implementation of a tax. Electric cables without PVC are now able to compete on prices concurring a substantial market share after the tax on PVC and Phthalates has increased the price for electric cables with PVC. The use of antibiotics as growth promoters has stopped due to a combination of a voluntary agreement and taxation. Leaded petrol almost disappeared from the market in just a few years because of the change of taxation in favour of non-leaded petrol. The high Danish registration tax implies, that smaller part a car ownership in Denmark than in our neighbour countries. The relatively low tax on petrol and diesel implies on the contrary, that many kilometres a driven in those cars. The Danish taxes on energy use have implied a massive insulating effort in Danish homes.

10.1. Environmental effectiveness

"Many environmentally related taxes have been assessed and found to be effective at reducing consumption/production of environmentally damaging products and activities, and contributing to resource protection. Environmentally related taxes introduce an incentive to change behaviour".

"Although many environmentally harmful activities and products are relatively inelastically demanded, for example energy and private transportation, significant reductions in the consumption and production of the polluting good/activity can be expected after the implementation of a tax.

Environmentally related taxation can be used to accelerate the exit of products from the market, for example SO_2 taxation (high sulphur-content fuels) in Sweden, Norway and Finland and taxation on chlorinated solvents in Denmark. Even before actual implementation, the "threat" of, or the practical preparation of, a new tax (or a re-alignment of tax rates in existing taxes) can cause producers and users/ consumers to start changing their behaviour".

Source: "Environmentally Related Taxes in OECD Countries – Issues and Strategies", OECD 2001

"Environmental Impacts

- **The environmental impacts of levies are positive**, but in most cases small relative to the problem being addressed.
- The effects of the levy are often limited because of the conservative nature of design.
- In cases where, over time, the scale of the levy has been increased, then the environmental effects also increase.
- The positive effect of levies on behavioural change is not always reflected in physical changes to the state of the environment.
- The case studies show **that even quite small changes in price/cost can send strong signals as to the desired behaviour**. This suggests that the environmental benefits are greater than would be estimated based on simple concerns on price impacts, given the levy's additional role of raising awareness and offering a "moral" signal".

Source: "Study on the Economic and Environmental Implications of the Use of Environmental Taxes and Charges in the European Union and its Member States", Ecotec Research and Consulting, prepared for the Commission, April 2001

Common benefits in Co-ordinated European Environmental Tax Reforms

There are many benefits related to at co-ordinated or dictated common contribution for increased use of economic instruments for environmental purposes – including environmental tax reforms ETR.

A co-ordinated European effort for environmental tax or budget reforms instead of national efforts will reduce the worries in industry for loosing competitiveness and reduce the need for compensations, exemption and rebates, that reduces the total economic and environmental efficient of the environmental taxation. United efforts will considerably possibilities for a tax change for industry leading to increased environmental benefits, reduced problems with cross-border trade and reduce the independence in the EU from imported fossil fuels from relatively unstable countries in the Middle East and Russia.

> ”Industry is often resisting the implementation of environmental taxes fearing the loss of industrial competitiveness. This also explains why most environmental taxes is supplemented by profound exemptions. To overcome this fear for loosing industrial competitiveness it is necessary to make a strategy on common basis”.

Quotation from: ”The Sixth Environment Action Programme of the European Community 2001-2010” KOM 82001) 31 Final, 24.1.2001

Such increased benefits by common European initiatives should not stop single countries in implementing national environmental tax or budget reform, because this continual can be done with clear benefits both for the environment and the State economy.

Environmental Taxes Will Increase the Development of Danish and European Environmental Friendly Technology

The use of economic instruments for environmental purposes is the environmental approach to the economical theory’s attempt to find ”The right prices”. An environmental tax reform based on an adjustment of taxation from income taxes to taxation of the use of natural resources and pollution will therefore be a significant step against getting a more environmental balanced pricing structure for consumption and pollutive behaviour respecting the principle that “polluter pays principle”.

Changing in the relative prices to benefit for products and productions methods with low use of natural resources, using renewables or recycled resources with a minimum of impact on environment will create an increased demand for new environmental friendly technology. The redirection thus will give economic surplus and increased possibilities for Danish industry because that a strengthened use of economic instruments in the form of a comprehensive environmental tax reform will implement a relatively big increase in the demand for new environmental friendly technology – and by doing that also give a strong incitement to Danish public and private research to follow the same direction.
To day it is clear that in the area of energy technology there will be a increasing market for energy saving technology and technology that it based on renewables. In the light of the continuous environmental problems in other areas such as the use of hazardous chemicals,

agricultural technology among others the world markets demand for environmental technology will increase in other areas then energy as well.

The creation of a foresighted home market for environmental friendly technology will clearly create new export possibilities for Danish industry because that a home market with market possibilities for new technology is crucial for the economic benefits of any research effort.

To strengthen the effect of the price signals there should be implemented a strong public research effort and a systematic effort to remove other barriers than the price signals that are taking part in slowing down the development and implementation of environmental friendly technology.

"Fiscal incitements can put energy savings forward"

"More widely use of economical instruments and price incitements in both the energy and transport sector with a sufficient internalising of the external costs, will create an important incentive to shift to a more economical efficient environmental technology". (Translated from Danish)

Quotations from: "Miljøteknologi og bæredygtig udvikling", Report from the Commission KOM(2002) 122, Bruxelles den 13.03.2002

" In Denmark there are a lot of big and small companies, that concentrate on energy saving and environmental friendly products. For them there will be huge market possibilities when the carbon dioxide emission because of the Kyoto agreement shall be reduced in all countries".
"All the way from the windmill industry over the production of and building elements to the Danish insulation solutions from Rockwool creates enormous exporting possibilities because of the Kyoto agreement and will create new jobs. An environmental and economical development in harmony". (Translated from Danish)

Quotation from: Peter Molzen, Adm. Director in Rockwool A/S taken from a feature article in " Politiken" 7.3.02

Environmental Taxes are Supplementary to Bans, Norms, Quotas and Standards

Many environmental problems are so serious that they primarily are reduces or removed by for example forbidding the use of harmful chemicals, by introducing minimum requirements for the use of energy by products and by introducing quotas for emission of pollution, so that the total amount is below the tolerability of Nature.

Bans, standards, norms and users quota normally have to be decided on the EU-level. This often takes a very long time and on several areas there membership countries does not have the same consciousness for the environment.

Environmental taxation can in theory be decided on the EU-level, but it must be done unanimous, which practically have been impossible to do. There is a possibility to reach agreement of a common minimum energy taxation directive in December 2002, but if so it will surely be very weak compromise.

On the contrary the EU treaty contains possibilities for the implementation of environmental taxes on a national basis, also in areas, where norms are harmonised. For example has Denmark introduced a tax on PVC that also includes packages even when it would not be

allowed to ban PVC packages because of the harmonisation of norms in this area. In the same way it will be possible for Denmark to impose a tax on diesel driven vehicles without particle filters even when a legal requirement would oppose the EU Directive on that area.

Environmental taxation will serve at least to purposes:

1. Environmental taxation can be used to reduce consumption, pollution and activities that are damaging for the environment or human health to an acceptable level. Such environmental taxes will raise revenue that can be used as a basic financing of the public expenditures.
2. Environmental taxes can be imposed with a relatively fast increasing tax level and therefore prompt producers and consumers to change behaviour and very quickly phase out the actual problematic substance of problematic behaviour. The revenue from these environmental taxes will disappear when the use of the problematic substances stops as planned.

Environmental taxation will therefore make it attractive for producers to develop new products or production processes without using the actual substances and therefore both reduce the use of the problematic substances and make a ban easier to introduce. At the time as the environmental taxes will have a positive effect on the environment and the human health they will create revenue that can be used as a basic to finance the public expenditures and make a reduction of other taxes possible.

The most important argument for the use of economic instruments for environmental purposes is, that it is cheaper for the society when the households and the companies themselves decide how and where they want to put their effort for the change of behaviour. Both because it's actually those parts of society that have to change their behaviour toward a sustainable development, and it is them, that knows where it's done economical cheapest.

You can for example choose to invest in a wood burning boiler, put more insulation on your loft and buy a wood burning oven or just to reduce the temperature in your house.

Report about "Green Market Economy"

The Danish Government has decided, that a report about "Environmental friendly Market Economy" has to be made.

"The report will do an analysis of the practical use of market based instruments for a better environment and industry's competitiveness in the green market". (Translated from Danish)

The Danish Ecological Council welcomes this initiative, even though the sole making of this report can be seen as a delaying element because there already exists several reports and surveys that recommends the use of economical instruments for environmental purposes and also documents the positive effects.

”In connection with the surveys of practical use of economic instruments the agreement between the to parties in the Government that:

"The Tax Stop is not hindering the necessary changes in taxes. If there are forcing reasons to implement or increase a tax or levy, it will happen in the way so that the increased revenue uncut will be used to reduce another tax. The same principle will be used if it of environmental reasons is desirable to implement or increase a environmental tax”

The report shall cover the following areas:

1. Possibilities and experiences with practical use of economic instruments as taxes, levies and subsidies, tradable pollution allowances and quotas, user charges, property rights, phase out of environmental damaging subsidies, rules for liability to pay compensation etc.
2. Potentials and experiences with technological innovation and the spread of environmental technological solutions together with initiatives that can stimulate and evolve the market so that the companies in a higher degree can use their environmental efforts as a positive signal in competition. Further on the practical use of measures that can promote environmental friendly and resource effective technologies and products.
3. The surveys shall also map the potentials in the environmental area and the necessity for partnerships public-private about initiatives that can put forward a technological development together with the function and the visibility of the market in the light of making it easier for consumers, investors and companies to act in a environmental and resource sound way.

On the basis of the three previous paragraphs there will if possible be recommendations as if to the future use of market based instruments and/or proposals to further surveys and more”. (Translated from Danish)

Source: Terms of reference for the task of doing a report about ”Green market economy", The Ministry for Environment, The Ministry for Economic and Business affairs, Copenhagen 22.2.02

”In the Government agreement the title ”Green market economy” implies a reform of environmental policy for using market based regulations. For economists this means an environmental policy, that puts great weight on environmental taxes and other forms for market based solutions in the shape of tradable pollution allowances.” (Translated from Danish)

Quotation from an article: Environmental Tax Reform and the Double Dividend” by Peder Andersen, Director of the Secretariat of the Danish Economical Council, SØM June 2002.

The Danish Ecological Councils example of a Possible Danish Tax Change:

The below example makes up a revenue neutral reform because all increase in revenues from environmental taxes and levies and savings in the public budget from the removal of environmental damaging subsidies is reversed to households, industry or clear environmental purposes.

The proposal is put in four parts:

1. A tax that will help reducing the main environmental problems and at the same time provides long-term revenue is as a primary principle placed first.

2. Examples of important environmental damaging subsidies, which must be phased out.

3. Possibilities for compensation or reversion of the increased revenue to households and industry.

4. Taxes and levy that is imposed on a sector only to finance an environmental effort and so will be reversed as subsidies to solve environmental problems in the same sector. These taxes and levies do not make revenue that can be used for the reducing of other taxes.

1: Proposals for Increased and New Environmental Related Taxes

Energy:

The Carbon tax is generally increased

The Global emission of Greenhouse gasses (GHG) is one of the Worlds main environmental problems – and will continue to be so after 2010, where the first weak steps to solve the problem in the form of the Kyoto agreement hopefully is taken.

Both in the period up to 2010 and after there is a need for very huge reductions of the global emission of GHGs of which CO_2 is the most important.

Denmark has in recognition of it's very huge emission of CO_2 per capita taken on a relatively huge reduction duty in the Kyoto agreement..

If the duty shall be fulfilled in an environmental honest way through real cuts in the CO_2 emission, Denmark have to make efforts for both energy savings, changes in the energy system to use less CO_2 intensive fuels and the use of renewables.

Many reports through time has pointed out that the low energy taxes in industry compared to household has made a situation, where the cheapest CO_2 reductions for the society as a whole is found in the companies. The best way to reach this is to adjust the price signal for energy use in industry so that more energy savings is done and the development and use of more renewables is more economically acceptable.

We propose that the economic incitement for lowering the emission of the GHG CO_2 is strengthened up till 2010 by implementing a double change in existing taxation. The tax should be index linked and should gradually be increases so that it is doubled in 2010.

The existing Carbon tax has been implemented as a "Package" consisting of both taxes and subsidies, so that industries competitiveness haven't been noticeable influenced. The proposed increase of the carbon tax can be done without harming the overall industrial competitiveness by using the same kind of rebates and reversions of revenues.

A doubling of the Carbon tax for companies from 100 DKK per tonne to 200 DKK per tonne until the year 2010 can be expected to induce a reduction in CO_2 emission of 10%. The Carbon tax in 2001 gave revenue of 4.8 billion DKK that fully is reversed to industry according to the companies' labour costs and by granting subsidies for energy saving measures.

Doubling the Carbon tax will therefore raise supplementary revenue of 3.84 billion DKK (2001) in 2010.

If a system with tradable permits for CO_2 emission is coming through it will bring a change for the structure for Carbon taxation so that a greater increasing part of the revenue in the future will come from auctioning the CO_2 emission allowances to Danish companies. In this example we stick to the same revenue in the two situations to ensure the overall economic

incitement for the companies to increase their energy efficiency and hereby reduce their emission of CO_2.

- ***Rebates for Carbon tax are phased out for companies with low energy intensity***

The Carbon tax for companies with light processes hasn't much influence for the total cost structure of these companies.

The basic tax per tonne emitted CO_2 is about 100 DKK. On this even companies with out energy intensive processes gets an automatic reduction in the tax and furthermore can make standard agreements about energy effective measures and hereby get even more reductions in the actual Carbon tax.

Typical this implies a very low influence from energy costs on the total costs and brings with it, that these companies don't focus on energy savings, Therefore a reduction of the rebates in the Carbon taxation will be an intelligent instrument to get carried out a number of the energy savings that is both economically sound for the companies and for the society.

The phase out of the rebates in Carbon taxes will implement higher costs for energy for these companies without energy intensive processes without reducing their competitiveness overall implementing a bigger focus on energy savings thus implement, that energy savings or –changes will be economic sound as well.

A tax of 100 DKK per tonne in stead of the actual tax of about 65 DKK per tonne for companies without energy intensive processes where agreements of energy savings is made will create a revenue of 1.8 billion DKK to be used for reducing labour costs, company taxes or income taxes for companies.

- ***Rebates for the CO_2 Tax is Reduces for Energy Intensive Companies***

The Danish energy intensive companies pays a very low carbon tax because that they can get rebates up to 97% of the carbon tax by making energy saving agreements with the Danish Energy Agency.

This big rebates ensures not just that the energy intensive companies don't loose international competitiveness but it also ensures that Danish energy intensive companies are secured an competitive advantage because of the German and British Carbon taxes now are higher for energy intensive companies than for Danish.

It is therefore important – seen in the light of the Danish Kyoto obligations and the conclusions of the Green book on Energy supply security from the EU Commission – to prepare Denmark for a common necessary solution in longer terms and hereby secure that Danish companies are in the best part in the energy effective development.

There is now space for an increase of the Carbon tax for energy intensive companies – not just by being included in the proposed doubling of the Carbon tax level but also by implementing an actual reduction of the rebate possibilities from 97% to 91% over a period of 8 years leading to a tripling of the lowest payable Carbon taxes.

Such a tripling is estimated to make the companies reduce their CO_2 emission by 5%. This will make the expected extra revenue up to about 2 billion DKK that can be used for reduction of the companies' labour costs or to be reversed according to the labour costs in all companies.

If a system with tradable permits for CO_2 emission is coming through it will bring a change for the structure for Carbon taxation so that a greater increasing part of the revenue in the future will come from auctioning the CO_2 emission allowances to Danish companies. In this example we stick to the same revenue in the two situations to ensure the overall economic incitement for the companies to increase their energy efficiency and hereby reduce their emission of CO_2.

- ***Increase of Energy tax for households***

Reduction of energy use is essential in all countries because a reduced energy consumption will improve the environment in general and reduce climate changes on one side and on the other it will reduce the use of natural resources for the production and consumption af products and services because overuse of energy normally also implies overuse of resources.

Many report and survey has pointed out that there still are very big reductions to be made on private consumption of electricity. They also state that these energy saving is best and cheapest obtained by making it more expensive to overuse energy.

This means also that eventually short lasting or longer lasting reductions in international energy prices must be responded by higher taxes so that households and companies are not prompted to abort the energy savings again.

We therefore propose that the electricity tax for households from now on is index regulated and gradually is increase until 2010 to the double of today (2001).

Such an increase will profoundly influent the households and will give a noticeable revenue that can be used for at visible reduction of income taxes, preferably by increasing the lower tax threshold and reduces low bracket of the ordinary income tax so that the income distribution will not be affected.

An increase in electricity taxes will also influence the companies because they have to pay the full tax for their use of electricity for not-production based purposes such as lightning in offices and so on. The influence is marginal compared with the other costs in the companies but might lead to more consideration whether to focus more on energy savings away from the production processes.

The proposed increase of energy taxes on electricity for households creates the biggest environmental effect at the lowest costs if it followed by a similar increase in energy taxation for companies.

Energy taxes for electricity used in households gave in 2000 revenue of 7.8 billion DKK. The increased energy tax will then give supplementary revenue of about 6.3 billion DKK in 2010 if we expect a fall in electricity use of 10% following the increased taxation.

- ***Increased energy taxation for oil, coal and gas for households***

It is still possible to save lots of energy on heating in private houses even though Denmark is a country with or rather high insulation standard. The high insulation standards is a result from early-implemented Danish energy taxes followed be subsidies to improve the insulation in private houses and higher legal demands for insulation standards in new houses.

On top of that it is still clearer that the time is over where it was possible to find and exploit new oil resources in a speed that could match the still fast growing consumption.

> ”Around the year 2010 the world total production of oil will start sinking. That was the final conclusive remark from the Worlds first international conference about the diminishing oil resources. At the same time the consumption of oil is still increasing.
> - The World has to get wiser very fast, the energy adviser of George Bush, Matthew Fields said at the conference. ” (Translated from Swedish)

“Miljöaktuellt” 2/2002, 5.6.02 – The Magazine of the Swedish Environment Protection Agency

If further energy savings are to be obtained in the existing stock of houses Building owner have to be even more prompted to build even more energy effective houses than to day and to obtain that there is a need of an increase of energy taxes for house heating.

To balance the energy market for heating private houses (and company building without energy intensive processes) we propose, that the energy tax for district heating from co generative plants is increased correspondingly, thus respecting that cogeneration of electricity and heat is more environmental friendly than heating of houses simply by burning oil og natural gas. The increase of taxes for district heating shall therefore be adjusted so that it still will be economically preferably to change heating source from electricity, oil and gas over to district heating based on cogeneration or renewables.

We propose that the energy tax for oil, coal and natural gas gradually is increased from about 2 DKK per litre oil / per m^3 natural gas until 4 DKK I 2010 and this is followed by implementing a index based price regulation.

In the estimate of the revenue we do not take a change between the various ways of heating into consideration, expecting that the overall energy taxation on all energy sources will mean that these heating changes only will affect the total revenue very slightly.

We do take into consideration that this increase of energy taxes will provide a 10% reduction of heat consumption making up total supplementary revenue in 2010 of 8.5 billion DKK in fixed 2001 prices.

- ***Tax on Carbon Emissions from ”flaring” from the North Sea Oil rigs***

CO_2 emission from oil and gas rigs in the Danish part of the North Sea makes up to a considerable percent of the total Danish CO_2 emissions.

If the flaring of ”wasteful” oil and gas from the Danish rigs is compared to the flaring from the Norwegian flaring, it is found, that the Norwegians only flare half as much as the Danes per produced oil or gas unit.

Much of the explanation of this is found in the fact that Norwegian rigs for years has had to pay a tax per oil unit for such flaring leading to a big economical interests in reducing the flaring to a minimum to save costs (and to improve the environment).

If a corresponding tax of 300 DKK/tonne CO_2 is implemented on the Danish flaring from the rigs in the Danish part of the North Sea it must be expected that the flaring will be reduced by 40% leading to a revenue of about 300 million DKK.

The tax should implemented with its full amount as soon as possible create maximum effect.

Transport:

Increase taxes on Petrol and diesel / tax per kilometre / road pricing

Transport is an area, where environmental damage is grower every year. There a successes with reducing transports problem with emission of e.g. NO_X, SO_2 , CO and Lead. But on the contrary the problems with CO_2 emissions and ultra fine particles are still growing bigger.

The existing tax on petrol is about 4 DKK per litre, leading to a total consumer price for the moment between 7.80 and 8.30 DKK. Diesel price is somewhat lower. These two taxes together amounts for 9.88 billion DKK in 2000.

Even with the same numbers of driven kilometres as to day (2001) there will be substantial savings in the use of fossil fuels, if consumers consequently always asked for cars with low fuel consumption per kilometre.

A noticeable increase in taxes will in that way prompt the coming car buyers to choose cars with low use of fossil fuels or cars that uses other forms of propellants. By using the same means car owners will be prompted to reconsider if it is necessary to use the car for every trip.

The Danish Ecological Council therefore proposes a gradual increase of taxes on petrol and diesel following the German increase so that the tax in 2010 will have gone up with 2,00 DKK in fixed prices.

As a supplement to the increase in fuel taxes there should be introduced a kilometre based tax. The tax rates per kilometre have to be differentiated according to the environmental data for each car type. In that way a car with a very low need for fuel will pay less per kilometre than a car with a medium or high use of fuel per kilometre.

The kilometre tax should also include a very low rate for zero emission cars because even when the cars do not emit any harmful substances there are other environmental problems just by driving the car.

An decision of a kilometre tax can be agreed on and implemented very fast and will not increase the border shopping problems, which can be expected to be an unwanted result of an increase of fuels taxes if Denmark and Germany and maybe Sweden don’t increase fuel taxation equally.

When the technology is fully developed and tested the kilometre tax can be replaced by a ”road-pricing” system based on satellite information about the geographical movements of the car. Road-pricing can beside the mere kilometre tax also be differentiated so that it will pro-

vide incitements to avoid driving in rush hours and in areas with high population density by using a differentiation in kilometre price depending on time and place for the actual driving.

If a kilometre tax should have substantial effect on the amount of driven kilometres and on the choice of energy efficient vehicles it must have a noticeable rate.

The Danish Ecological Council takes in to consideration, that a average cars uses petrol for about 0.67 DKK per kilometre. We therefore proposes an additional tax rate on top of the payment for petrol of a starting 0.10 DKK per driven kilometre ending in 2010 with 0.30 DKK in fixed prices for an average car (13 km per litre). This rate has to be differentiated so that more energy efficient cars will pay a reduced rate and less energy efficient cars will pay a higher rate per driven kilometre.

By increasing the fuel price with 2 DKK per litre – corresponding to an increase of about 30% - we expect that the Danes will drive fewer kilometres in cars and choose more energy efficient cars. This means that the total sold amount of transport fuels will drop by 9% in 2010 compared to 2001. For this calculation we use the normally respected elasticity of minus 30, which means that when prices increase by 100% the consumption will drop by 30%.

The introduction of a kilometre tax on average 0.30 DKK per kilometre corresponding to an increase in fuel prices of 3.50 DKK per litre in 2010 we expect a supplementary reduction of car driving with 12% in 2010 compared with 2001.

An increase in petrol tax rates following the German tax increase will raise revenue of 1.0 billion DKK in 2010 in fixed prices.

An implementation of at kilometre tax will calculated on to days amount of driven kilometres of 45 billion kilometres a year raise an additional revenue of 10.8 DKK in 2010 in fixed prices.

The increased revenue from this increased fuel and kilometre taxes can be reversed to households by reducing income taxes and increasing the lower tax threshold and reversed to companies by introducing of subsidy according to the companies labour costs (as is done with the most of the revenue from the carbon tax).

- ***Taxing Fuels for Airplanes, Ferries and other Ships***

The present and fast growing aviation is one of the big environmental problems especially contributing to climate change problems. Also ferry routes and especially the rather new tendency to use high-speed ferries causes additional CO_2 emissions by having a very high rate of fuel use per passenger kilometre.

For both types of transport it is a fact, that according to EU-rules and international agreements it is not allowed to tax fuel used by aeroplanes and ferries. The only possibility for some kind of environmental taxation is therefore to introduce passenger taxes or airport taxes, which is done in many countries also in Denmark.

This situation seems now to have a change to be changed, because the proposal for a directive on common minimum energy taxes in EU from 1997 includes an opening for the adoption of national taxation of fuel used in aeroplanes and ferries or to extend this possibility to flights inside EU according to bilateral agreements. The proposal thus do not open for envi-

ronmental taxes on fuel used for flights in and out of the EU. For including these flights it is still necessary to act in international forums to obtain a change in international agreements. The proposal for a directive on minimum energy taxation has been blocked since the introduction especially by Spain. The proposal saw however a break through at the Barcelona summit in March 2002, where the principles in the proposal was adopted by the council and the full proposal was sent to the council of finance ministers to finish the negotiations so that the proposal could be finally adopted in Copenhagen in December 2002.

As a starting point environmental taxes on fuel for aeroplanes should only be one part of a ”package” that also should contain demands to aeroplane producers to develop planes with lower emission of CO_2 and to drop development of highly environmental damaging types of planes such as subsonic planes and planes that go higher and faster than the existing types.

Furthermore it’s a special problem, that freight transported internationally by plane contributes considerably less to cover the total costs than passengers do. The problem is that the growth in airfreight transport is noticeable higher than growth in passengers, so that the total growth (before 11.th September) is about 5% annual.

The big problems with a fast growing aviation sector is obvious, though the opinion about how big an the effect environmental taxes will have is divided. Everybody though agrees, that environmental taxes will have some effect as an effective instrument sort out the passengers, that doesn’t have ”basic need” for air transport, but only uses air transport because of the very low prices. Environmental taxes will also create incentives to increase the load factor and as a next step to create incentive for the development of more fuel-efficient planes.

A good estimate for the rate of an environmental tax would be from 0,8 -1,8 US$ per kilo air fuel if the goal just is to stabilise the CO_2 emission from aviation at the present level where air transport is growing with an annual 5% and the fuel use is growing with 3% (before 11.th September).

Is this rate for tax on air fuel compared to the minimum taxation in the EU on diesel for transport use it is at an average of about 0,3 US$ per kilo, Though some countries has a substantial higher tax rate e.g. UK with 0,87 US$ per kilo.

Thus the burning of fossil fuels in planes in great heights is contributing far more (estimated 2 - 4 times) to climate change than the burning of fossil fuels in trucks on the ground. If it’s taken into consideration that an equal tax for transport in air and on the ground in respect of the damaging effects should be implemented, then the taxation of air fuel should be considerable higher than the tax rate for diesel for road transport.

In our example for an environmental budget reform we use a tax rate for air fuel on 0,5 US$ per kilo in fixed prices in 2010, which is higher than the EU-minimum for trucks but lower than the diesel tax rate in many countries. This rate is not enough if the goal is as modest as stabilising the fuel use in aviation, which indicates clearly that the air fuel tax must me increased considerably also after 2010.

In 2000 there were sold a total of 823.000 tons jet fuel in Denmark, only 6% of this for domestic flights.

If we estimate that the air fuel taxation will reduce the annual growth in aviation to 1½%, which adds up to a total growth by 16% in 2010, compared to 2001. This will raise revenue of an annual 3.8 billion DKK in fixed prices in 2010. If no tax is introduced the prognoses foresees an annual growth of 3%, which adds up to 34% in 10 years.

The aviation sector is also subsidised in more than one way because of directly support for the development and production of aeroplanes (e.g. through financing the development of military planes), by subsidising directly producers of aeroplanes, which is accelerated after the 11th September and through subsidising the constructing of airports and the matching infrastructure. Finally aviation is subsidised by accepting that business s paying very expensive tickets and getting bonuses which both implies possibilities for cheap holiday travels by plane.

All these environmental harmful subsidies should be phased out, which in our example is estimated to a total saving for the Danish State of annual 1 billion DKK in 2010.

Exactly the same kinds of environmental harmful problems exist for international navigation, where it too not is allowed to introduce environmental taxes corresponding to navigation's contribution to climate change problems. In this sector environmental tax rates should be a little lower than taxes on diesel for road transport, because the road transport creates more climate change contributions, that navigation.

We haven't calculated this into our example but estimate annual revenue of 500 million DKK in 2010.

Finally it is important to state that both types of environmental taxes have as a minimum to be implemented at EU-level. And that taxes on international aviation and international navigation requires international agreements. The examples of revenues will only be created if international changes can be agreed on - without these international agreements the taxes will not be allowed and an theoretical Danish interminable tax will have the effect, that planes and ships will tank fuel in countries without taxes.

Taking into consideration the huge and still growing evidence of the damaging of the environment a removal of subsidies to aviation and the introducing of international agreed minimum taxes on air fuel should be negotiated as soon as possible and the latest together with the agreed renegotiations of the Kyoto protocol for the years after 2008-2010. The rates of this negotiated tax have to be of considerable levels as to take part in the aim of the Kyoto protocol to stabilise the percentage of atmospheric CO_2 at the double of pre-industrial level.

"Despite the substantial climate effects, the CO_2 emissions of international aviation are not subject to any quantitative obligations. They are not included in national level emissions inventories and thus do not fall within the scope of the provisions of the Kyoto Protocol. The Council thus finds an alarming regulatory gap relating to the use of the atmosphere by international aviation. For reasons of climate protection, this gap needs to be closed a s a matter of urgency.

The Council recommends to the German government that this regulatory gap should be closed by introducing of user charge. Charging the use of airspace can make a valuable contribution to climate protection because it generates both an environment-related incentive effect and financial resources. The environment-related effect has two leverage aspects: First, it is to be expected that user charges on aviation will drive air fares upwards, thus dampening the growth in demand for air transport. Second, user charges can create incentives to modify aircraft, engines, air routes etc. such that these are associated with least possible emissions".

Quotation from: "Charging the Use of Global Commons", German Advisory Council on Global Change, January 2002

- ***Broaden the levels in the "Annual Ownership tax"***

A slow environmental improvement in the energy efficiency of new cars is going on. This means that new cars/trucks/busses generally drives noticeable more kilometres per litre petrol or diesel.

Both private persons and companies are prompted to buy new energy effective vehicles by charging a annual environmental based car ownership tax that is progressive according to the car's use of petrol or diesel. Despite this urge there's still a tendency to invest in bigger and heavier cars, resulting in a too low increase in the average energy effectivity – seen in connection with the huge environmental problems that is caused by a overuse of fossil fuels. On top of that these bigger cars do have a tendency to use more and more energy having extra equipment that is not included in the car's energy efficiency data.

The Danish Ecological Council proposes therefore that the stepwise rates in the annual ownership tax do change three steps corresponding to an increase in fuel efficiency of 5 km/litre. The best and therefore also the cheapest car in annual taxation should in 2010 the latest go 25 km/litre instead of 20 km/litre in 2001. And the best and cheapest diesel car in annual taxation should go 37 km/litre in 2010 instead of 32 km/litre in 2001.

If steps are changed in 2003, 2006 and 2009 and new steps with higher rates for the low energy efficient cars are implemented, the average car will have to go 5 km longer per litre fuel in 2009 to avoid an average increase in annual ownership taxation

The annual ownership tax raises in 2001 revenue of almost 7 billion DKK. With the implementation of three more steps it is estimated, that this will increase the revenue with 3 billion DKK in fixed prices, which is reduced to 2 billion DKK annually because of an expected increased energy efficiency of 10% because of the adjustments of steps and rates.

- ***Registration Duty is changes so that it in future is graduates according to the environmental efficiency leading to at rise in registration duty for the most environmental damaging cars.***

Registration duties are high in Denmark, which have implied that the number of cars per 1000 inhabitants in Denmark is relatively low in comparison with the other EU countries.

This fact has a noticeable environmental effect to keep down the daily mileage, because several surveys show that families with cars do transport themselves much longer each day than families with out cars. Furthermore the surveys points out that a huge change in the families transportation habit occurs when the first car is bought.

Considering this there are good environmental reasons to maintain a high registration duty on cars and other vehicles.

The registration duty is fixed as a percentage of the price of the car. This means that the registration duty is almost indexed according to the prices of the cars. This again means that the registration duty over the years accounts for a still smaller part of a Danish car owner family's budget, because that the growth in real income has been higher than the growth in price index.

The registration duty can be called an environmental related tax because of the environmental coincidence, that more expensive cars are bigger and heavier and therefore also has the

worst energy efficiency. This is not the fact for the most energy effective cars or cars using other propellants than fossil fuels. These (few) types of cars are for a certain period exempted for registration duty or gets very big rebates.

The Danish Ecological Council proposes, that a new system for the registration duty is developed so that cars with high emission of CO_2, NO_x and particles will face a raise in registration duty whilst environmental more capable cars will stay on today's rates.

We expect that the increased registration duty on cars with high environmental damaging emission initially will raise additional revenue of 2 billion DKK in fixed prices in 2010. This is reduced to 1 billion DKK because of an estimated reduction of the size of new cars and a reduction in environmental damaging emissions.

Chemicals:

- ***Hazardous and Unwanted Chemicals are Taxed***

Hazardous chemicals are a considerably threat to the environment and to human health.

The use of hazardous chemicals should as a principal rule be banned as soon as possible. Many countries has adopted the so-called generation target, where it is stated that all dangerous chemicals shall be phased out before 2020.

However such bans are very slow, troublesome and complicated to achieve and have as a minimum to be adopted by the EU on the basis of thorough surveys. If the generation target is going to stand a real change to be reality it is necessary to use all existing means.

The introduction of Environmental related taxes on hazardous chemicals is an effective mean that goes nicely together with the generation target and the gradual but slow implementation of bans.

Use of environmental taxes will inflict the companies to gradually reduce the use of hazardous chemicals in existing processes and products. It will strengthen the economic and political pressure to develop new processes and products that is not using or containing hazardous chemicals.

This also improves the possibility for introduction of bans because the political will to introduce the bans is far higher when alternative processes and products are developed and used.

Furthermore the introduction of environmental taxes will make products that contain hazardous chemicals more expensive so that consumers will demand alternative and relatively cheaper products simply out of economical reasons.

> "Conversely, economic disincentives could be used to discourage industry from marketing chemicals with unacceptable hazards. The taxation of chemicals considered by governments to be of concern would provide an incentive for at company to decrease production of the taxed chemical and shift to making alternatives that are not taxed. The resulting difference in price would encourage consumers to select cheaper alternatives that are more environmentally friendly".

Source: "OECD Environmental Outlook 2001", page 231, OECD, 2001

The Danish Ecological Council therefore proposes, that the chemicals listed on the Danish Environmental Protection Agency's list of unwanted chemicals is taxed according to their actual potential for damaging the environment and the human health.

All together we propose in this example that taxes are implemented in 2010 in an extent that without reduction in use would have raised revenue of 6 billion DKK in fixed prices.

This taxation will however create a rather big change in behaviour, which get us to estimate that the use of taxed hazardous chemicals will be halved because of the taxation. This results in extra revenue of 3 billion DKK in fixed prices in 2010.

- ***Increase of tax on Chlorinated Solvents***

We do here present an example of chlorinated solvents as an example of the effects from environmental related taxes on unwanted chemicals

Chlorinated solvents are dangerous to human health and are under serious suspicion of having cancer-causing effects and on top of that there are a big threat for the Danish ground water reservoirs, which has lead to several closings of waterworks in the recent years.

In 1996 an environmental related tax of 2 DKK per kilo of the three chlorinated solvents was introduced. This was among other things because it was feared that the ban on CFC's would lead to an increased use of chlorinated solvents because of their ability to substitute CFC for some uses.

This rather small tax cause that the actual use of tri- and tetrachlorethylene fell drastically and that dichloromethane disappeared from the market.

The environmental tax has recently been increased to 5 DKK per kilo.

The Danish Ecological Council however sees strong reasons for a continued effort to reduce the use of the two remaining chlorinated solvents because of their high environmental damaging effects. We propose that the environmental tax is increased from 5 to 20 DKK in 2010 correspondingly with an increased effort to get the actual use of especially trichlorethylene banned as soon as possible.

As a result of the increase of the tax we do expect the used amount to fall with 60% from 2001 to 2010. Taking the reduced use into consideration we estimate increased revenue from 2 million DKK in 2001 to 3 million DKK in 2010 in fixed prices.

The proposed increase should be seen in the light of the Norwegian tax on chlorinated solvents of 50 NKK per kilo and the fact that the use of trichlorethylene is banned in Sweden.

- ***Increase Taxation of PVC and Phthalates***

The widespread use of PVC is still creating problems for the disposal of waste. PVC in the incineration plants with its content and chlorine is an important factor both for the formation of the very poisonous chemical Dioxin and for the formation of big amounts of waste because of the necessary adding of lime for reducing hydrochloric acid in the smoke.

Furthermore the use of softened PVC is an environmental problem for consumers because that the most often used "softeners" are Phthalates, that has hormone-like effects and are causing changing in the genes etc. Thus the use of PVC softened with phthalates is banned in toys for children under the age of three.

There are therefore every reason to try and reduce the use of PVC end especially phthalates as much as possible by introducing bans norms and taxes.

At present the taxes is fixed from a starting point of 2 DKK/kg PVC and 7 DKK per kg phthalates. The rates have not been increased from 2001 to 2002 and by such not price indexed.

We propose that the present rates from now on is indexed and that the rates gradually are increase to the double of to day in 2010.

This will create additional revenue in our example of about 50 million DKK, if a reduction in use of 20% in 2010 is taken into the calculation.

- ***Increase Taxation of Pesticides***

Even though Denmark has reduced the use of pesticides in the recent decades, the remaining use is still too much – also seen compared with the plans of action and the agreements that has been made with agriculture in earlier plans. There are need for additional efforts that could comprehend both bans of the worst pesticides, construction of pesticides free zones, bans of using pesticides in private gardens and an increased environmental taxation of agricultural use of pesticides.

We propose that the taxation on all kind of pesticides is gradually increased so that the taxes in 2010 will be 50% higher than to day in fixed prices.

Environmental taxes on pesticides are collected as a fixed percentage of the recommended price, differentiated for use and by that also poisonous effect. These taxes are in that way index regulated.

We expect a fall in use of pesticides in 20101 of 10% compared to today as a result of the tax increase and the complementary relatively reduced price for alternative methods in agriculture. This can all in all be estimated to additional revenue of 130 million DKK in fixed prices.

- ***Tax the use of Pressure-treated wood and timber***

Pressure-treated wood and timber are still a threat to environment even though the worst and most hazardous chemicals such as Arsen and Creosot are now banned for use in Denmark. For example it is still allowed to import creosote-treated wood. To day the high-pressure treatment contains mostly different compositions of Copper, Chrome and Biocides. All three chemical substances are hazardous to the environment and human health both in production, use and disposal.

However new treatment are being developed for example the heat treatment of new wood so that the same or higher durability for the wood is obtained without using any hazardous chemicals at all. Another way to increase durability is to use wood from trees that actually is impregnate from nature's hand.

A considerably problem for the spreading of the habit to use wood that has a high durability by nature or by methods without using harmful substances is that such wood is still more expensive than traditional CCA-pressure-treated wood.

Every experience shows that the introduction of a tax that shifts the economic benefits from the environmental harmful product to the environmental friendly product. A good example is the change from leaded to unleaded petrol that happened in a few years just by changing the price signal a little bit.

For Pressure-treated wood a survey from September 2001 ”Analysis of the Possibilities for increased use of tax regulation of chemicals” proposes a tax rate on 20% of the price for the wood, which correspond to 500 DKK per m^3. This rate is estimated to raise additional revenue of 154 million DKK in the first year.

It must though be expected that the introduction of a environmental tax of that rate will imply a total shift away from today pressure methods using hazardous chemicals long before 2010. This is why we don't estimate any additional revenue from this tax in 2010.

Resources:

- ***Increase Tax on Extraction of Aggregates***

The Danish aggregate tax is present 5 DKK per ton – and has not been indexed for some years now. The aggregate tax is levied on a broad range of raw materials reaching from sand and stone, chalk, lime and clay to sphagnum and mould. Also imported and processed products such as granite, bricks and marble are taxed.

Some Danish raw materials – and maybe especially the occurrence of clay, sand and gravel is still diminishing, which makes it obvious to create incentives for a higher percentage of saving and reusing of these materials.

Thus a increase of the aggregates tax cannot be expected to very much effect for changes the use towards a considerably lowered extraction – apart from some optimising of the use a and small increase in reuse. The aggregate tax must be seen as a payment to the state for using not renewable Danish natural resources.

The Danish Ecological Council proposes that the aggregates tax from now on will be indexed and increased to the double in fixed prices gradually until 2010. By doing this we expect a reduction of the use of natural resources of 10% and a annual revenue for the state of 140 million DKK in 2010 that can be used to lower other taxes.

- ***Increase Tax on Extraction of Oil and Natural Gas from the Danish Part of the North Sea***

Because of the existing Danish concession agreements with Danish and foreign oil extraction companies in the North Sea they pay a very low extraction tax to the Danish state. With the present oil price – and especially seen in the light of the oil prices in 200 and 2001 – this creates big profits to the extracting companies – and by doing this it also incites companies to increase the rate of extraction to the disadvantage of a longsighted Danish energy supply strategy and also reducing other incentives for energy savings thus contributing to climate change.

The existing payments for concessions and taxes on oil and gas extraction amounted in 2000 to 7.4 billion DKK.

This amount is estimated to be increased with 50% so that the profit from oil and gas extraction was divided more fairly so that the Danish state and with that the society did get more benefit out of the Danish oil reserves.

An increase with 50% will create a revenue for the state of additional annual 3.7 billion in fixed prices, which can be used for public expenditure and thus make an reduction in income taxes possible.

”It can be argued that the state should have as big a part as possible of the basic interests from carbon extractions. Carbon occurrence in the Danish underground belongs as a starting point to the state in opposition to other industry, where production machinery as a starting point is owned by citizens”.

”Taking a hypothetical view that the neutral carbon extraction tax has been introduced in 1982, it can with great insecurity and assuming the same historic investments be calculated, that the state would have had an additional revenue of annually 1 billion DKK in fixed 2001 prices. Especially in 2000 where a high basic interests rate was realised because of increasing oil price and production the revenue for the state would have been about 5 DKK higher. For the period seen as a whole the additional revenue would have been 14 billion DKK assuming the same production and more than 15 billion DKK by taken a smaller distortion loss into account. 1982 and 1983 is not taken into the calculation because of lack in formations. It have to be underlined, that this is very insecure and is only done to enlighten the effects of the neutral carbon extraction tax.”. (Translated from Danish)

Quotations from " Rapport fra kulbrintebeskatningsudvalget", Ministry of Taxation, Oktober 2001

Various areas:

- ***Increase Tax on Waste Water***

To prompt the wastewater treatment plants to reduce the outlets of the nutrients nitrogen and phosphate to recipients outlets are taxes at present rates of 20 DKK/kilo total nitrogen and 110 DKK/ Total Phosphor in 2001/2002.

These rates of taxation are very low seen in the light of the much higher revenue from the water tax and should be increased noticeably – for the purpose of creating additional economic incentives for reduction of the outlet of nutrients.

We therefore propose a gradual increase of tax rates so that they are increased 200% in fixed priced in 2010. In this example we estimate that this will imply a reduction of the outlet of 10% in comparison with to day. In 2002 the wastewater taxes created revenue of 280 million DKK. The tax increase in our proposal will create additional revenue of 476 million DKK in fixed priced in 2010.

- ***Tax Advertising***

In Denmark we have seen an enormous growth in the amount of all kind of advertising. To day about 2 billions of brochures, advertising papers and flyers are distributed each year in Denmark. This number corresponds to 10.000 tonnes and is about 500 single advertising to each household, which again corresponds to 40 kg annual per household. The amount has been doubled in the last 10 years and if nothing is done this enormous growth will probably continue.

The Danish Ecological Council proposes to try and stop this growth by introducing an environmental tax that covers all kind of advertising – also using electronic mediums, because of the fact that advertising not only creates waste of paper but also is an important factor in the current use and dispose culture.

Advertising has especially three different environmental harmful functions. A lot of energy and water and chemicals are used and wastewater is produced in the production of advertising on paper. Advertising makes us buy more than we need and often more than we intend to buy. Advertising makes us go around in cars to buy the stuff that's is advertised.

We propose that advertising distributed to households is taxes with a rate of 2 DKK per 100 grams in price indexed 2001 prices. On advertisements and electronically advertising should a tax of 20% be paid of the price, that the advertising companies pays.

We propose that a part of the revenue from the advertising tax is reversed to the written press as well as to the electronically medias, but it have to be a subsidy of journalistic production. Therefore we propose that the reversion of the additional revenue should be done according to the percentage of editorial substance combined with the number of copies.

We don't want to harm Public education and information or social organisations like informational broadcasts or advertisements for Red Cross or Amnesty International. Therefore should these kinds of "advertising" be excepted from the tax.

In our example we construct the rate of the advertising tax to imply a reduction in the amount of advertising of 10% in 2010. This can be estimated to produce additional revenue of about 5 billion DKK in 2010 of which 1 billion DKK is proposed for reversion for subsidising the above-mentioned journalistic purposes.

"There is need to find measures that will shift the focus of advertising towards products and services that are socially and environmentally sound and are produced in a sustainable way, at the expense of advertising that leads to the consumption of products and services that threaten human health, the environment, social equity and human rights".

Source: "Report from Regional Roundtable for Europe and North America – 2002 World Summit on Sustainable Development". June 2001

- ***Tax on Waste is Increased***

The amount of waste has faced a substantial growth in many years in Denmark in spite of campaign for the opposite and an increased effort for recycling. This tendency is even main-

tained despite increased tax on waste disposal that seems only to have reduced the growth a little bit.

If the amounts of waste should actually fall in the future there is a need of stronger incentives for producers to produce products and goods with a greater capability for recycling and to produce by using fewer resources and less environmental harmful ingredients. To create these incentives many different means must be taken into consideration.

One of the most important means is to introduce a substantial increase of the environmental taxation on waste disposal. This will make the disposal of the used products more expensive and by doing this it will force producers to consider the disposal of produced goods more. Furthermore a differentiation of the waste tax rates must be considered according to the effects on the environment, including waste of resources, ability of recycling of incineration.

Wee propose in the example that waste disposal taxes generally are increased to the double in 2010 compared to today and is indexed. The proposed differentiation must then be done revenue neutral to the doubled rates.

By doing this we estimate a reduction in waste disposal of 15% compared to what would else be expected. This will create an additional revenue of 0.7 billion DKK in fixed prices in 2010. (From 1 billion DKK in 2001 to 1.7 billion DKK in 2010).

- ***Industry Pays the Full Tax on Tapped Water***

Households pay a tax on tapped water of 5 DKK per m^3. This tax has not been indexed for a few years.

Waterworks do pay the same rate as households for the amount of ”leaked” water that exceeds 10% The leaked water is measured as the difference between the produced water and the amount of water, that is actually paid for by consumers.

Far the most of industry gets the payment for water refunded and is actually not paying the tax on tapped water.

The environmental tax on tapped water is just a minor part of the total price for tapped water and for the wastewater treatment that often amount about 30 – 35 DKK per m^3. Especially the price of the wastewater treatment differs very much from on local community to another.

The total price for water, tax and wastewater treatment is an effective incitement for water saving behaviour.

If the possibility for refunding the water tax is removed from industry they will be even more prompted to implement actions that will reduce the use of drinking water either just by further savings or by installation of reuse systems. By setting the water tax to the same rate for both households and industry it is estimated that this will lead to more economic efficient water saving efforts.

We propose in this example that the environmental tax on tapped water form now on is indexed and that it covers all industry.

Industry in Denmark uses annually about 150 million m^3. By broadening the water tax to all industry we estimate a reduction in water use for industry of 10%. This will raise additional revenue of 675 million DKK in fixed prices in 2010.

It should though be considered if a environmental tax on tapped water should have the same rate despite the consumers geographic location. The water resources is very different across the country and the necessity for water use reduction is necessary some placed and not

other places. And it should also be considered if some industrial sectors with a production that at the same time uses a lot of water and produces goods, that is exposed to international competition should be “protected” either by an exception from the tax, by sectorial reversion or by introducing a ”border-tax” system, where Danish produced exported products gets the tax refunded and imported products pays the tax.

It could also be considered to reverse the additional revenue from the full water tax on industry according to the companies’ labour costs using the same principles from the reversion of the carbon tax. Industry could be divided in groups and inside these “water use groups” all the tax from these companies could be reversed.

2: Phase Out of Environmental Harmful Subsidies

- ***Phase out transport tax deductions***

”The tax benefits from the tax rebates for long transports between home and job does not especially benefit rural districts or low income groups.

- People especially obtain the transportation tax deduction if they are from Zealand and situated in a big circle around the Copenhagen area. Also people from Lolland-Falster and outside the big cities in Jutland and on Funen do benefit from the transport tax deduction while people situated in the rest of Denmark get far less benefits. This fact is in opposition to the normal statement that this transportation tax deduction is especially important for inhabitants in rural areas.
- A bigger percentage of inhabitants in rural areas than in towns gets the transportation tax deduction. But also for residents in rural areas the transportation tax deductions gives more benefits for residents in rural communities on Zealand than for residents in (more) rural communities in Jutland and Funen.
- The more you earn the bigger benefits from transportation tax deductions you get. People with high wages gets more benefit than people with low wages.

I 1998 750.000 working people got a total deduction on the tax bill of about 6.9 billion DKK from transportation tax deductions. These deductions implied a tax loss of about 2.7 billion DKK, which equals an average tax relief of 3,700 DKK for each in average.

The transportation tax deduction incite directly to increase transport and indirectly as follows structural influences. On the one hand the transportation tax deduction implies, that people will look for jobs in a greater geographical area than they else would have done. On the other hand the transportation tax deduction implies, that the localisation of labour and of companies are altered. A number of persons must be expected to move further away from their job than they would have done without a transportation tax deduction, but this tendency might be weakened of the high housing prices in areas with many commuters. Companies may also be expected to choose a location further away from labour than they would have chosen without the transportation tax deduction.

The transportation tax deduction gives limited economic benefits for society …In a situation with boom and low unemployment the economic social benefit of general subsidies for long transport between home and job must be expected to be limited.

The transportation tax deduction has an allocation that benefit the regions around the capital and to a smaller extend around other big cities. The tax deduction has a tendency to increase transportation and the deduction is estimated to have limited economic social influence. In this situation could more efficient ways of subsidising regions and persons that really needs the benefits. As examples could be subsidies for trainees that have to go far to work, subsidies for unemployed that finds work a long distance away etc.”. (Translated from Danish)

Source: ” Pendling og befordringsfradrag - Report nr. 00-04” The Danish Transport Council, 2000

The Danish Ecological Council proposes, that the transportation tax deduction is phased out so that it no longer exists in 2010. This will remove an environmental harmful incentive to seek jobs far from homes. Also an environmental positive effects on companies localisation might be achieved without creating noticeable problem for the social distribution.

Phasing out the transportation tax deduction will save a public expense of about 2 billion DKK.

- ***Reorganise or remove subsidies for agriculture***

On World-level 7 times as much money is used for subsidising agriculture in the rich countries, than the same countries uses for development aid.

Subsidies for agriculture are mainly given in North America and Europe and the removal or reorganisation of these environmental harmful subsidies is an apparent place to focus. Such a removal together with a removal of tariff barriers will also give the developing countries better possibilities for exporting their agricultural products and hereby also increase the possibilities of development.

EU has a very high rate of agricultural subsidises, which creates problems with a far too high use of pesticides and nutrient – and also gives problems according to the negotiations of economic conditions for the entry of the 10 application countries into the EU.

A first step in the right direction will be to change the criteria for subsidising away from subsidies for export over to subsidising special crops as a general area depending subsidy and subsidising environmental friendly ways of farming. Next step should be a real phase out of agricultural subsidising, starting with the export subsidies that should be removes as soon as possible because of their harming effects on agricultural export from developing countries. As a third step a reallocation of all remaining subsidies from production subsidies over to real environmental subsidising and social support to the maintaining of economic possibilities to live in the EU rural areas.

We don't include any savings from the phasing out and reorganising the EU and Danish agricultural subsidies, because it must be expected that a saving in the EU budget for agricultural export have to be used for subsidising in 10 new EU membership countries. The savings will therefore a the highest only be seen as a "saved new expense" in the Danish budget.

- ***Phase out Subsidies for Environmental Harmful Energy Productions***

"The dream of cleaner energy will never be realised as long as the balance is tilted toward dirty technologies. For a start, governments must scrap perverse subsidies that actually encourage the consumption of fossil fuels".

Source: *Editorial from: "The Economist" of 6. July 2002, Page 11.*

" Limit climate change and increase the use of clean energy"

" Measures at EU level":

"Phase out subsidies to fossil fuel production and consumption by 2010".

Quotation: "A Sustainable Europe for a Better World: A European Union Strategy for Sustainable Development" EU-Commission 15.5.01 – adopted by the Council in Gothenburg 2001

In the report: ”Energy Subsidies in the European Union” there is a list of subsidies, that can be identified in the energy area. It is very obvious that subsidies for environmental harmful energy production as energy produced with the burning of fossil fuels or nuclear fuel is far higher than subsidies to environmental positive energy production by using renewables and to energy savings.

By phasing these environmental harmful subsidies out over a (short) number of years there will be remarkable benefits for the environment together with some savings in EU and national budgets. Furthermore an increased effort for increased energy efficiency and energy based on renewables as recommended in the “Green Paper - Towards a European strategy for the security of energy supply” from the EU-Commission will increase the security of energy supply by introducing an reduced dependence on the mostly political unstable countries, from where the EU to day imports fossil fuels and nuclear material.

”When only looking at money transfers and tax relives (see Table S.1), it can be concluded that the total amount of subsidy that the EU and its Member States give to renewable energy is substantially lower than the amount of subsidy to fossil fuels, and probably in the same order of magnitude of the subsidies to nuclear alone.

Source: Energy Subsidies in the European Union - Final Report. Working Document of the European Parliament’s DG for Research. (Not yet Published by the European Parliament.)
Frans Oosterhuis, Institute for Environmental Studies (IVM), Vrije Universiteit, Amsterdam, July 2001

In this proposal we don’t include the savings form the removal of environmental harmful subsidies. Environmental harmful energy subsidies have a big extend in the EU, but a smaller one in Denmark.

3: Reversion of revenue from the Environmental taxes

The revenue from the increased and new environmental taxes and the removal of environmental harmful subsidies is reversed, so that the total public tax revenue remains constant, so that the social distribution is not changed and so that industrial competitiveness is not reduce all in all.

The fulfilling of the expected environmental effects by reduced use of the taxed substances and behaviour in a more sustainable way, so that changes to at more environmental friendly behaviour is rewarded economically, is deducted before the revenue for reversion is calculated.

Thus the proposed environmental tax reform will induce a certain reallocation following the principle of ”the polluter pays”, and hereby hit those that “overuse” and reward those who “save”.

Reversion of Revenue to Households

- ***Reversion by Increasing Social Benefits or as a "Green Check"***

Families with children will of course be affected relatively hard by increased consumer prices on basic needs such as electricity, water and heating if they are not extra compensated for that.

The Danish Ecological Council therefore proposes that a part of the overall reversion is done by increasing the value of the "Children's Check" with 1.000 DKK in fixed prices. This part of the reversion will be of about 1,2 billion DKK.

In the same way we propose that certain low income groups gets a special part of the reversion of revenues by increasing specific social benefits such as retired peoples pensions, cash benefits, unemployment benefits and educational aid from public funds.

All in all we estimate that a reversion of 6 billion DKK have to be used to compensate these low income or none income groups.

It could also be considered to reverse by using a negative tax or to reverse a lump sum as a "Green Check" that covers the increase expenditures for basic needs. The amount of the "Green Check" must then be adjusted according to age and income.

- ***Increase of Income Tax threshold***

Increasing of income tax threshold will create a tax benefit that is equal for everybody with an income over the threshold.

An increase of Income tax threshold that benefits economy most for low incomes will be in fine distributional balance with the increase of the environmental of which some as described isolation seen will affect lowest incomes most.

The Danish Ecological Council proposes that the income tax threshold is increased with 5.000 DKK, which will result in a reversion (loss of revenue) of about 8 billion DKK.

- ***Reduction in lower bracket of ordinary income tax***

To compensate people with low incomes for the fact, that most of the proposed new or increased taxes are regressive the reversion of revenue must be done in a way that benefits the low incomes most. The Danish Ecological Council therefore proposes that a big part of the revenue is used to reduce the low bracket of the ordinary income tax from the present 5,5% to 1% in 2010. This tax is paid by almost everyone with an income over 33.000 DKK.

The revenue in 2001 from the ordinary income tax – lower bracket was 37 billion DKK. This implies that the reversion must be 30.3 billion DKK in fixed prices in 2010 to reduce the lower bracket to 1% in 2010.

- ***Reduced VAT on organic food and ecolabelled products***

Many countries have a differentiation in VAT for different product groups. In the EU it is allowed to have to different rates as a maximum, whereof the lower should be at least 6%.

Denmark doesn't have a reduced VAT though very few goods do not pay VAT.

The Danish Ecological Council proposes that at part of the revenue from increased and new environmental taxes and removal of environmental harmful subsidies are reversed to consumers by reducing the Danish VAT for organic food and ecolabelled products to a lower rate.

We propose that the VAT organic food is reduced from 25% in 2002 to 6% in 2010. In 2001 there was consumed organic foods for 2,5 billion DKK of which VAT amounts to 625 million DKK. If the VAT is reduced to 6% and an increase of 100% in consumption of organic food in 2010 the public loss of revenue from VAT will be about 1 billion DKK in 2010.

We also proposes that a number of products labelled with specific international and acknowledged ecolabels gradually will get the reduced VAT too resulting in a reduction in public revenue from VAT on these products for about 1 billion DKK in fixed prices.

The reversion of revenue for these purposes will reduce the price of a number of environmental friendly produced basic goods which will benefit the ordinary consumers.

On top of that will the incitement to produce and sell more environmental friendly products lead to savings in public expenditures to environmental protection and restoration. These saving are not calculated in this example of an environmental budget reform.

- ***Reversion of Revenue to Industry:***

Additional revenue from new and increased environmental taxes that affects industry is reversed to the extent in which they would have reduced Danish industry's competitiveness compared to companies abroad.

Reversion can be effected according to several different principles:

- Subsidies to environmental improvements such as energy saving initiatives.
- Reversion of revenue from environmental taxes by reducing labour costs or simply as a subsidy according to the labour costs.
- Reversion of specific taxes to the relevant sectors so that both the environmental taxes and the reversion animate to environmental improvements.
- Reversion by reducing other taxation or better possibilities for writing off environmental investments.

In the diagram we do distribute certain amounts for the different types of reversion. This shall only be taken as an example for this proposal. In a actual environmental budget reform reversion have to be negotiated and agreed on by industry.

4: Environmental Taxes that are Imposed in a Sector to Finance an Environmental Necessary Effort

- ***Introduction of environmental tax on diesel vehicles without particle filters and reverse the revenue as a subsidy to help to install the filters***

The exhaustion from diesel vehicles do contain ultra fine particles. These particles are more and more considered responsible for quite a big number of too early deaths in densely build-on areas. Diesel exhaustion too is considered being the biggest cause to the high increase of the occurrence of asthma and allergic diseases in the Danish population especially amongst children.

To day exist diesel filters for bigger diesel vehicles that on the whole can remove the problems with ultra fine diesel particles in exhaustion. And diesel filters are gradually introduced for diesel cars.

Installation of particle filters unfortunately are not yet standard for new diesel vehicles, and it will take quite a long time before the problem is solved if economic instruments are taken into use to create an incentive to install effective filters on existing diesel vehicles.

The Danish Ecological Council proposes that a special charge is introduced for diesel vehicles without particle filters. We propose 1.500 DKK for cars, 2.000 DKK for small cars and 3.500 DKK for trucks and busses all in fixed prices. This will create revenue of approximately 2 billion DKK each year that shall be reversed as subsidies to installation of particle filters on new and old diesel vehicles.

Alternatively an extra environmental tax of 0.10 DKK per litre can be introduced on diesel corresponding with a supplementary reduction of tax on vehicles that do have particle filters installed in a revenue neutral way. By doing it this way the possible negative effects on competitiveness will be more invisible, but on the other hand it will increase the border tax problems.

- ***Public Transport pays fuel taxes and gets the revenue reversed according to labour cost / driven kilometres***

The Danish public transport does presently not pay fuel taxes. Therefore the economic incentive to save fuel by focussing on increased energy efficiency is small. On the contrary labour costs accounts for a very big part of the total expenditures, which contributes to over sizing of busses and potential numbers of passengers, which leads to at reduce energy efficiency per kilometre.

To discourage this effect fuel must be more expensive and labour costs must be reduced.

The Danish Ecological Council thus proposes that a reallocation of about 1 billion DKK is done by taxing the use of fossil fuels in Public transport and to reverse the revenue as a subsidy for labour costs.

- ***Energy Ineffective Products are Taxed and Energy Effective Product are Subsidized***

To day energy efficient products are often the best buy, when both the price for the product and the cost of energy in its lifetime is taken into consideration.

Still Energy inefficient products are bought too often because the price for buying the energy inefficient product is less than the price for the energy efficient product and because information about the total costs in the product's lifetime often is lacking. Together with this many consumers can't manage a lifetime consideration or they simply lack the extra money in the buying situation.

This disproportion hinders many very easy and cost-efficient energy savings simply by hindering the optimal purchase of energy efficient products.

This situation needs to be changed in two steps:

First we need to tighten the standards for information about the total economy in the buying situation.

Secondly to introduce an environmental tax on the energy inefficient product and reverse the revenue fully as a subsidy to energy effective product with the same function to change the relative prices in the buying situation according to the energy efficiency of the products and by doing that changing the actual price signals.

The thought is not strange to Danish politicians because a broad political majority agreed on doing this for refrigerators, freezers and windows as a part of the total energy agreement leading to a new law for the energy sector.

In our example we propose revenue from taxing energy inefficient products of 800 million DKK with full reversion as subsidies to the development and sale of energy efficient products. By doing this we estimate that the sale of energy inefficient products will drop by 20% and the sale of energy efficient product will go up with 15% until 2010.

Proposal for a Danish Enviromental Tax and Budget Reform 2002 - 2010

All changes is gradually from 2002 til 2010 **Proposals for taxation and reversions**	Present Taxation	Additional Taxation	Revenue 2000 in billion DKK	Estimated reduction or change in Consumpt.	Additional revenue before all in consump bill. DKK	Additional revenue after all in consump bill. DKK
CO2 emission from flaring from oil platforms	0,00	300,00		40%	0,5	**0,3**
Increased tax from extraction of oil and gas in the North Sea		50%	7,40		3,7	**3,7**
Increased taxes on petrol and diesel	4,00	2,00	9,88	20%	4,94	**1,0**
Introduce environmental differentiated road pricing	0,00	0,30	0,00	20%	13,5	**10,8**
Increase steps in annual car ownership tax			6,93	-	3	**2,0**
Increase registration tax for energy inefficient cars			14,12	7%	2	**1,0**
Increase carbon tax	100 DKK/ton	100 DKK/ton	4,80	10%	4,8	**3,8**
Phase out rebates on carbon tax for energy extensive industry	65%	35%		5%	1,8	**1,7**
Reduce rebates on carbon tax for energy intensive companies	3%	9%		5%	2	**1,9**
Increase tax on elctricity use in households	0,55	0,55	7,82	10%	7,82	**6,3**
Increase tax on oil, coal and natural gas use in households	2 DKK/l	2,00	10,60	10%	10,6	**8,5**
Increase tax on pesticides		50%	0,38	10%	0,19	**0,1**
Increase tax on agrregates	5 kr/m^3	5 kr/m^3	0,18	10%	0,18	**0,1**
Industry pays full tax on piped water	0,00	5,00	1,56	10%	0,75	**0,7**
Increase tax on chlorinated solvents	5,00	15,00	0,00	60%	0.002	**0,0**
Tax unwanted chemicals				50%	6	**3,0**
Tax fuel for airplanes and ferries/ships**	0,00	3,20	0,00	18%	5,9	**5,3**
Increase tax on solid waste	350,00	350,00	1,00	15%	1	**0,7**
Increase tax on waste water	100%	200%	0,28	10%	0,56	**0,5**
Tax advertising, e.g. handouts, fliers, commercials, brochures		20DKK/kilo		10%	4,5	**4,0**
Increase tax on PVC and Phthalatets	2 DKK/7 DKK	1,00	0,04	20%	0,065	**0,1**
Tax high pressure treated wood and timber	0,00	500,00		100%	0	**0,0**
Taxes for finansing environmental improvements						
Tax diesel vehicles without particle filters and reverse for filters						**0,0**
Tax fuel use in public transport and reverse for labour cost						**0,0**
Tax energy inefficient products				20%	1	**0,8**
Reverse as subsidies til energy efficient products				-15%		**-0,8**
Removal of harmful subsidies						
Remove tax rebates for transport to job						**2,0**
Reorganize or remove subsidies for agriculture						**-**
Remove subsidies for energy based on fossil fuels and nuclear						**-**
Double Dividend						
More jobs and a broadenend tax base has a positive effect						**-**
Savings in expenditures for environmental damage						**-**
Reversion of revenues				Additional revenue in 2010 in fixed prices		**57,5**
				Reversed revenue in 2010 in fixed prices		**-57,5**
Private households:						
Social compensations						**-6,0**
Reduce lower bracket og income tax from 5.5% to 1%						**-30,3**
Increase income tax threshold						**-8,0**
Reduce VAT on organic food and ecolabelled products						**-2,0**
Industry:						
Reversion to industry according to labour costs						**-6,2**
Subsidies for introducing cleaner technology						**-2,5**
Change taxation and write off for environmental investments						**-1,5**
Increase investments in public transport						**-1,0**
			Revenue in 2000 in billion DKK:	**64,99**		

** These taxes needs common decisions in the EU and/or nabouring contries.

All prices are in 2001-prices - Indexation is assumed for all existing and new environmental taxes.

Description of the Double Benefits – Double Dividend

The existence of a ”double dividend” or not has been the topic of numerous discussions, modelling and ”before and after” evaluations.

The thinking behind the existence of a double dividend is very shortly:

- By increasing the taxation on resource use and environmental damage there will be savings in expenses to repair after environmental damage.

- By using the extra revenue to reduce a so called distorting tax like the income tax, it will create more jobs and a greater incitement to do a little extra which leads to a broadened tax base for the rest of the income taxation.

On top of that comes to extra (Danish) benefits:

- If it’s more expensive to use natural resources and energy and to affect the environment in a negative way this will create a relatively better competitiveness situation for environmental friendly technology in Denmark.. This will give Danish industry increased possibilities to develop environmental friendly technology for the home market and to develop further for export.

- The reduction of the high Danish direct tax on labour income will reduce a number of negative effects for the necessary financing of the welfare state.

The experts don’t agree on the actual double dividend effect, and they do bring estimates forward that goes from no effect at all till that the double dividend will have remarkably effect in creation of new jobs and an improved national economic situation.

One thing is relativity sure:

No surveys or calculations have shown a negative double dividend, so if it exists it will contribute positively to a better national economy and a positive creation of jobs.

We expect therefore that there will be a certain double dividend coming from the proposed environmental tax shift, but in this example we don’t calculate with any revenue from reduced expenses to unemployment benefits and a broadened tax base and less expenses caused by less environmental damage.

> ”If the burden of taxation is shifted away from labour and other production costs towards the environmental costs of products and processes, this can reduce the distorting impact of taxation on the economy and benefit the environment (thus providing a ‘double dividend’)”.

Quotation from: ”Environmental Signals 2002” The European Environment Agency, 2002

The VAT Question

An often stated misunderstanding in connection with a revenue neutral environmental tax reform is that the state will ”earn” a lot more in VAT that of course also will be imposed on the increase rate from the tax. This is a wrong way of thinking.

The revenue to be used for public expenditures is determined of the total sum that the end consumers use to buy products and services.

Therefore will a fully reversed increase in revenue from environmental taxes not lead to higher revenues to the state from VAT because the consumers total and average purchasing power will be exactly the same before and after the implementation of a environmental tax reform as stated. And with the same purchase power the state will get exactly the same revenue from VAT – but it will be divided a little bit different between the types of purchased products and services.

Regressive and Progressive Taxes

The proposed environmental tax reform is constructed due to the following conditions:

- Environmental taxes shall have a noticeable environmental effect
- The total revenue for the state from all kind of taxes and also the public expenditure shall be neutral – no raise in tax pressure
- Neutral social distribution effects
- Neutral or improved industrial competitiveness in proportion to abroad seen as industry as a whole.

Some increased taxes or tax reductions are regressive. That means that they affects people with low incomes hardest or benefits them least, leading to that the disposable income is negatively affected compared to people with high incomes.
Other taxes or tax relief are progressive. That means that they reduce in percentages the disposable incomes of people with high incomes more (or reduced less) than they reduce the disposable income of people with low incomes.
A few taxes are income neutral. That means that they affected both high and low incomes with an equal share of their disposable income.

Therefore is very important to know the effects of the proposed changes in taxes, income tax threshold and social benefits for different types of families, so that the total ”package” – an environmental budget reform – can be constructed in a satisfactory way.

Below is briefly listed, if the proposed changes in direct and indirect taxation are progressive or regressive, together with the actual ”strength” with which they benefits or harms families with high or low incomes.

- ***Increase of indirect environmental taxes:***

Environmental taxes are often accused of being distinct regressive which means that they affect people with low incomes much more than they affect people with high incomes. This is however not correct. A new survey carried out by Risoe National Laboratory documents, that the big negative affect on low-income groups is strongly exaggerated.

> ”All in all the distributional effect from environmental taxes does differ from these from other taxes by being less regressive, but there a considerably difference between the different kinds of taxes. Environmental taxes and energy taxes are just a bit more regressive than the VAT but less regressive than the taxes on spirits and tobacco. On the contrary transport related environmental taxes differ from other kinds of taxes by being progressive. This difference causes that the total effect of environmental taxes are noticeable less regressive than VAT and other excise duties. This result is not affected if families’ expenditures are used instead of the families’ disposable incomes.
>
> The overall conclusion is that environmental related taxes are less regressive than other kinds of indirect taxes. This result contradicts the widespread opinion that environmental taxes considerably are social unbalanced. If alone environmental and energy taxes are considered they are a bit more regressive than VAT”.

”Distributional effects of Energy and environmental taxes, Henrik Klinge Jacobsen, Katja Birr-Pedersen, Mette Wier, Risoe National Laboratory, November 2001”

- ***Reduction of direct taxes and increasing the social benefits:***

- **Increasing of the social benefits – retired peoples pensions, cash benefits, unemployment benefits, educational aid from public funds, child allowances and more** will benefit people with low incomes, especially people out of work. The increase of social benefits is resultantly clearly progressive.
- **Increase of income tax threshold** benefits distinct families with low incomes because this wills ease the economy of every person with the same amount. Increase of income tax threshold is like this progressive.
- **Reduction of the tax percentage of the lower bracket of the ordinary income tax** will benefit all taxpayers by a percentage reduction of tax payment per earned DKK. The reduction will give a bigger economic benefit the more the family earns.
- **Reduction of tax percentage of the medium and top bracket of the additional income tax** is very regressive because it will only benefit the high and very high incomes following the principle that the higher the income the more benefits of the reduction. Both very low and many normal incomes will not benefit by such an increase.

Therefore it is possible to construct an example of a comprehensive environmental tax and budget reform so that the social distributions between rich and poor is not affected as a result of the tax reform, with regard to the regressively and progressive from both indirect and direct taxes.

Low Income Families Will not be Economically Affected more than other Families

This example for a comprehensive Danish Environmental tax reform presupposes that the social distribution in the Danish society will not be affected of the proposal.

To underline this presupposition we have made a calculation of the impacts from our proposal on different types of families.

We shall though be the first to admit, that a very exact calculation of the overall effects of a comprehensive environmental reform is out of our capacity. Our calculation is only made to illustrate the fact, that it is possible to construct a Danish environmental tax reform without laying extra economic burdens on low-income families. We recommend that a professional calculation is done either by using the so-called "Law model" from the Ministry of Finance and Business Affairs or done by the Danish Statistic Department so that eventual unexpected consequences of our proposal can be corrected.

As it can be seen from the rough calculations the effects of the described environmental budget reform are not very different for the different income types.

It is remarkable that all family types will gain from this example of a possible environmental budget reform. This is naturally not so, but is caused by our rough calculation. It is the relative distribution of changes between the different types of households that is interesting.

Our entire example is in social balance compared to the household incomes and a little bit more positive for families with children.

Note that in the table a negative difference means more money for the families.

Effects from the Environmental Budget Reform on various types of families and incomes

				1 adult		1 adult		2 adults		2 adults
Rise			estimated	no children	Estimat.	no child	Estimat.	no child	Estimat.	no child
in price			consupt.	low income	consupt.	high inco.	consupt.	low incom.	consupt.	high inco.
per unit			wage	0 bil	wage	exp. Car	wage	cheap car	wage	2 cars
Incl. VAT	Units	Consumption/tax		difference		difference		difference		difference
	DKK	Household income	150.000	-5.753	400.000	-18.403	300.000	-13.343	650.000	-31.053
	DKK	Increase lower threshold	5.000	-2.250	5.000	-2.250	5.000	-4.500	5.000	-4.500
-1.000	DKK/year	Childrens "Check"	0	0	0	0	0	0	0	0
0,69	DKK/kWh	Elektricity	1.200	828	1500	1.035	1.600	1.104	1.800	1.242
2,00	DKK/ l olie	Heating	1.000	2.000	1200	2.400	2.000	4.000	2.500	5.000
0,00	DKK/m^3	Tapped water	50	0	60	0	100	0	110	0
200,00	DKK/unit	Waste disposal	1	200	1	200	1	200	1	200
2,00	DKK/m^3	Wastewater	50	100	60	120	100	200	110	220
0,31	DKK/km	Km in env.car/year (20 km/l)	0	0	0	0	15.000	4.650	12.000	3.720
1.167	DKK/12 yea	Reg. tax (price 140.000)	0	0	0	0	1	1.167	1	1.167
1.440	DKK/year	Annual ownersh. Tax	0	0	0	0	1	1.440	1	1.440
0,42	DKK/km	Km i other car/year (15 km/l)	0	0	15000	6.250	0	0	18.000	7.500
2.000	DKK/12 yea	Reg.tax (price 240.000)	0	0	1	2.000	0	0	1	2.000
3.800	DKK/year	Annual ownersh. Tax	0	0	1	3.800	0	0	1	3.800
0,30	DKK/km	Tranportation deduction	0	0	5000	1.500	5.000	1.500	10.000	3.000
0,30	DKK/km	Plane/Ferry km	1.500	450	4000	1.200	3.000	900	10.000	3.000
1%	% of DKK/y	Foodproduct excl. Organic	13.000	130	15000	150	21.000	210	26.000	260
-14%	% of DKK/y	Organic and ecolabelled	1.000	-140	2000	-280	2.000	-280	4.000	-560
0,5%	% of DKK/y	Other products	50.000	250	100.000	500		0		0
			Differen.	-4.185	Differen.	-1.778	Differen.	-2.752	Differen.	-3.564

				1 adult		1 adult		2 adults		2 adults
Rise			estimated	2 children	Estimat.	2 childr.	Estimat.	2 childr.	Estimat.	2 childr.
in price			consupt.	low income	consupt.	high inco.	consupt.	low incom.	consupt.	high inco.
per unit			wage	0 bil	wage	exp. Car	wage	cheap car	wage	2 cars
Incl. VAT	Units	Consumption/tax		difference		difference		difference		difference
	DKK	Household income	150.000	-5.753	400.000	-18.403	300.000	-11.506	650.000	-29.216
	DKK	Increase lower threshold	5.000	-2.250	5.000	-2.250	5.000	-4.500	5.000	-4.500
-1.000	DKK/year	Childrens "Check"	2	-2.000	2	-2.000	2	-2.000	2	-2.000
0,69	DKK/kWh	Elektricity	1.800	1.242	3.200	2.208	2.800	1.932	3.500	2.415
2,00	DKK/ l olie	Heating	1.300	2.600	2.000	4.000	2.000	4.000	2.500	5.000
0,00	DKK/m^3	Tapped water	130	0	140	0	160	0	180	0
200,00	DKK/unit	Waste disposal	1	200	1	200	1	200	1	200
2,00	DKK/m^3	Wastewater	130	260	140	280	160	320	180	360
0,31	DKK/km	Km in env.car/year (20 km/l)	0	0	12.000	3.720	0	0	0	0
1.167	DKK/12 yea	Reg. tax (price 140.000)	0	0	1	1.167	0	0	0	0
1.440	DKK/year	Annual ownersh. Tax	0	0	1	1.440	0	0	0	0
0,42	DKK/km	Km i other car/year (15 km/l)	0	0	0	0	0	0	25.000	10.417
2.000	DKK/12 yea	Reg.tax (price 240.000)	0	0	0	0	0	0	1	2.000
3.800	DKK/year	Annual ownersh. Tax	0	0	0	0	0	0	1	3.800
0,30	DKK/km	Tranportation deduction	0	0	4.000	1.200	0	0	8.333	2.500
0,30	DKK/km	Plane/Ferry km	2.000	600	6.000	1.800	4.000	1.200	16.000	4.800
1%	% of DKK/y	Foodproduct excl. Organic	24.000	240	30.000	300	30.000	300	40.000	400
-14%	% of DKK/y	Organic and ecolabelled	1.000	-140	5.000	-700	2.000	-280	8.000	-1.120
0,5%	% of DKK/y	Other products	50.000	250	133.000	665	100.000	500	215.000	1.075
			Differen.	-4.751	Differen.	-6.373	Differen.	-9.834	Differen.	-3.869

Minimal Influence on Industrial Competitiveness

”To date, environmentally related taxes currently imposed by OECD countries have not been

identified as causing significant reductions in the competitiveness of any sector, although this can in part be due to the fact that Countries applying environmentally related taxes have provided for total or partial exemptions for energy intensive industries”.

”Pre-announcing the introduction of environmentally related taxes and tax rate increases, and a gradual reduction or phasing out of rebates and exemptions, are two policy options that could ease implementation, make environmental taxes more effective, while also addressing competitiveness concerns”.

”Possible negative competitiveness impacts on some sectors from the environmentally related part of a broader reform might thus be reduced. And while some sectors may face a net loss in competitiveness if countries expand environmentally related taxation unilaterally, other more environmentally benign sectors of the economy could improve their competitiveness, inter alia depending on how revenues generated in the reform are redistributed”.

Quotations from: ”Environmentally Related Taxes in OECD Countries – Issues and Strategies”, OECD 2001

“In April of last year we introduced a Climate Change Levy that will, it is estimated, save emissions of five million tonnes of carbon a year. This is not an extra burden on industry or a barrier to economic growth, the changes are revenue neutral and the £1 billion we expect to raise in the first year will be recycled to business, partly through extra support for energy efficiency and partly through cuts to employers’ National Insurance Contributions”.

Quoted from “The power of the public purse…” by Paul Boateng, Member of UK Parliament for Labour and Chief secretary to the Treasury, “Inside TRACK”, Spring 02.

“What is good for environment is also good for business. Time after time it is evident that the environment doesn’t cost anything but on the contrary gives access to win new shares on the worlds market. Actually I can’t see many companies that wouldn’t benefit from implementing environment and sustainable development in their ways of working”

“We are lucky that our substance has the right environmental profile. The more the environment is in focus the better for us. Other companies face the opposite situation because of their ways of producing and use of natural resources. But they probably won’t be in the market in 50 years”.

“I don’t believe that the majority of the consumers will pay extra for at product just because it is produced in a sustainable way. It is therefore important that sustainable products also are the cheapest. Else it won’t work. And here authorities play an important role.”

“He (Claus Stig Pedersen) means that this have to be done by using taxes and levies.”

“Authorities have to create a system that makes it easy to do the right things and difficult to do the wrong things. Consumers have to face benefits by choosing environmental optimised products.”

Quotation: Claus Stig Pedersen, Environmental Director in Hartmann International – from Jyllands-Posten 2.9.2002

The Danish pressure from taxes is high but is according to most calculations slowly going down.

Normally the Danish pressure from taxes is not mentioned as the biggest problem because a high pressure from taxation can be seen as a instrument for a rather good social redistribution in society together with the Danish welfare model where most of the welfare tasks is financed as public expenditures.

On the opposite it is very often said, that the high Danish income taxation gives to little incentive to do something extra because of the fact that the income often just leaves less than half for private consumption.

The proposed tax changes will help a lot to this problem and at the same time the proposed Environmental tax reform does not changing the income distribution, it does not reduce the industrial competitiveness and it does not increase the total pressure from taxes. On the other hand the proposal will change taxation from income tax to taxing pollutive behaviour and the use of scarce and environmental damaging natural resources.

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Annex 1:

Recommendations for Implementation of an Environmental Budget Reform from PETRAS

"In the light of the research, it is possible for us to put forward recommendations for ways to increase acceptance of environmental taxes and aid the introduction of ETR:

- *Give an independent body responsibility for ensuring that the revenues are used as promised.*

Focus groups in France, Ireland and the United Kingdom stated that if revenue distribution was carried out by an independent body including representatives of various stakeholders, then that would increase trust. The body would need to have the ability to clearly show how much revenue had been collected and where this money had been allocated. A number of countries have had green tax commissions, but our recommendation is that the body should also oversee the revenues.

- *If there is a tax shift, explicitly show the reduction in payroll taxes on people's payslips.*

The evidence from the German and Danish focus groups shows that people will notice the increase in environmental taxes, but will not know about the reduction in payroll taxes unless it is made apparent to them.

- *Earmark revenues for energy efficiency programmes targeting areas which can be addressed at zero or negative net cost.*

It would make sense for the use of revenues for environmental programmes to be targeted at addressing the energy efficiency gap (the areas where energy efficiency would cost less than is currently being spent on wasteful use of energy). It is notorious that there is a large energy efficiency gap in both the domestic sector and among SMEs. There would be a great deal of potential to address it and actually save consumers money, ensuring that the measure was cost-neutral. The cost-neutrality would need to be continually emphasised in publicity.

- *Also provide grants for local environmental projects, renewable energy and public transport improvements.*

Members of the focus groups were keen for revenues to be spent on local environmental projects that had visible effects in their communities. Many members of the focus groups were also keen for money to be devoted to public transport and the development of renewable energy. It might be sensible to devote some revenues to such purposes in order to increase public acceptance. Investment in public transport will also increase the elasticity of petrol use.

- *Send utility customers vouchers for energy efficiency investments with their bills in order to make the connection between the levy and its benefits tangible.*

It is clear from the research in Denmark and Germany that there is a need not only to make reform easily comprehensible, but also to publicise the benefits and make them visible. In particular, the connection between 'costs' and 'benefits' needs to be made clear and tangible, so that the reform is not seen simply as higher taxes, as it has been by many people in those countries. One way to make the link tangible would be for customers to be sent vouchers with their utility bills offering substantial discounts on energy efficient products. Vouchers with bills would provide something tangible and make the connection between 'costs' and 'benefits' very clear. An enclosed booklet advising on how to use the vouchers would explain the financial savings and raise awareness of the potential for energy efficiency measures.

- *Visible help for those on low incomes.*

An ETR that lowers only payroll taxes is regressive, particularly affecting those without employment. If there are extra transfer payments to counter the effects, they should be explicitly labelled, so that people are aware that the regressive effects are being dealt with. An alternative way to counter regressivity would be to give everyone an equal payment, rather than lowering specific taxes.

The limitation of a voucher scheme is that those on relatively low incomes often find any kind of capital expenditure such as replacing an old boiler or fridge difficult to afford. A special discount card could be sent to all those on low incomes to enable them to obtain such goods at very low cost. Fraud could be addressed through relatively simple security measures.

- *A tax-free allowance..*

It is crucial that people do not feel simply 'punished' by ETR, as many have in Denmark and Germany. A tax-free energy allowance was suggested by a Danish focus group as an incentive to enable people to avoid paying the tax if their energy consumption was low enough. The ETR in the Netherlands does have a tax-free allowance in order to avoid burdening the poorer parts of society excessively and which was carefully set to make the tax non-regressive. It also has the advantage that it makes the marginal incentive to reduce consumption greater.

- *Careful choice of terminology.*

The term 'ecological tax reform' was not found to be transparent. In some countries there are also strongly negative associations with the word 'tax', which raise intense suspicions. If the revenues are under the control of an independent body rather than the government, then there seems no reason why the measure should not have a different name".

Source: Environmental Tax Reform: What Does Europe Think? PETRAS, Policies for Ecological Tax Reform: Assessment of Social Responses, A Framework 5 Project: EVGI-CT-1999-0004, Summary given in Bruxelles 5.th March 2002

"We can conclude, that industry and the public do know the new environmental taxes, but only very few knows, that the revenues are reversed. Only one out of five interviewed companies and one person out of 50 in the focus group did know, that the revenue from the environmental taxes is reversed by reducing labour costs".

"The companies as well as the public consider to a great extend environmental taxes as "just new taxes". They don't believe that environmental taxes actually reduces the environmental problems and are generally sceptical to the fact, that the taxes are reversed".

"It is more likely that a further change in taxes to more environmental taxes will be received in a positive way by companies and the public if change is followed by intensive information about the expected environmental effects and documentation about the reversal of the revenue and the potential positive effects of that". (Translated from Danish)

Quotations from an article "Companies and Households reactions on environmental tax reforms" by Anders Larsen, AKF – Amternes og Kommunernes Forskningscenter. SØM, juni 2002.

Annex 2:

The common Campaign Platform from EEB

European Environmental Bureau is the biggest European environmental organisation with 133 member organisations. The EEB has launched a common campaign for an Environmental Budget reform both on EU-level and national levels.

16 organisations participate in the campaign. 13 organisations from EU membership countries and 3 from application countries.

On the EU level the campaign focuses on the approval of directives etc. that commits the membership countries to implement the use of economic instruments for a sustainable development on a national basis. Actually the campaign focuses on the adoption of the Monti-proposal for a directive about minimum energy taxation with binding minimum rates in each country. The principles of the proposal were approved at the summit in Barcelona 15. - 16.3.02 and the proposal was sent to the council of finance ministers to achieve an agreement of the actual content in the directive so that it could be finally adopted in Copenhagen in December 2002.

NGO's in all 16 countries actively campaigns for an increased national use of economic instruments for at more sustainable development. This results in a number of proposals for national environmental budget reform and/or conferences on this topic.

Below extracts of the common campaign platform and the proposals can be seen:

MAKING PRICES WORK FOR THE ENVIRONMENT

Environmentally sustainable development is an illusion if market incentives continue to stimulate wasteful consumption and production habits and make environmentally sound changes costly and non-competitive. That is why the EEB launched a campaign to change market incentives to make prices work for the environment. The two main tools we promote an environmentally motivated fiscal reform, including the shifting of taxation burdens and subsidy policies. In order to prevent negative social impacts and accelerate the market response, we promote specific flanking measures.

Environmental taxation is one of the main tools for moving towards sustainable development. Environmental taxes have positive effects on the environment, push innovation and efficiency. They can also contribute to the creation of jobs, especially when the tax revenue is recycled through the economy by lowering taxes on labour (environmental tax reform, ETR). Their overall economic impact can clearly be seen positive, contributing to a better quality of life and better preconditions for prosperity on the longer term. These findings are supported not only by environmental organisations, but by large parts of society, international organisations such as the OECD, consumer associations, trade unions and individual companies.

Government policies support environmentally problematic production and consumption in different ways still. Direct subsidies to coal production or intensive agriculture are clear

examples. Tax-rebates for commuting by car or tax-exemptions for air-travel are others. Such subsidies need to be phased out, and replaced by subsidies that accelerate environmentally friendly alternatives for energy production, transport etc.

Social measures need to be put in place to avoid any potential social injustice stemming from the effects of the environmental fiscal reform we propose. We know this is possible, it is a matter of designing the policies in a proper way.

For the campaign we have set quantified targets and timetables for the national levels. We hope to create a new or renewed debate in all EU countries on environmental tax reform, and therewith create a synergy that will make it possible to take more bold steps on the national level, knowing that similar processes are taking place across the EU. We promote the adoption of the current proposal of the Commission on energy products ("Monti-directive"), but see it as a very initial start of EU level co-ordination only. And we insist it is not a precondition for national reform to have EU agreements. (Skal oversættes til dansk)

Quotation from: "The European Environmental Bureau Campaign on Environmental Fiscal Reform", "Campaign Platform" Bruxelles, 2002

The Demands of the EEB Campaign:

Campaign Objectives :

- Implementation of an ambitious and effective Environmental Fiscal Reform throughout Europe
- Raising awareness about EFR among the public as well as among governments and private sector players
- Raising the quality of the political discourse on Environmental Taxation Reform and overcoming resistance

Campaign demands :

- An additional minimum 10% shift in tax base from labour to natural resources by 2010, at EU and national level – as an example to show it is possible
- Removal or reform of all environmentally adverse subsidies by 2005
- Energy saving and efficiency policies
- Fiscal incentives for environment protection

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”Economic instruments, like taxes and tradable permits, are environmentally effective and economically efficient policy instruments. OECD has long advocated for a consistent use of these instruments and has carried out extensive analysis of their implementation”.

Quotation from ***OECD’s Website about Economic Instruments for Environmental Purposes: http://www.oecd.org/EN/home/0,,EN-home-471-nodirectorate-no-no-no-8,00.html***