

FIATA's position on CO₂ and other emissions

in freight transport and logistics

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Executive Summary

Addressing the environmental problems created by human activity is now safely mainstream thinking in business management all over the world. Various measures have been proposed, and in some cases implemented, to encourage the containment of emissions in different human activities, after the agreement on the Kyoto Protocol in 1997, but no global agreement on transport emissions is yet in place.

FIATA is adamant the reduction of greenhouse gas emission from global shipping should take place through the adoption of measures agreed upon by the International Maritime Organisation (IMO) and is not in favour of regional or local solutions, as these normally end up distorting the market conditions in ways that are difficult to contain or overcome. We identify this issue as a global governance one and this is particularly clear when thinking of global industries such as shipping and aviation, or global logistics, which FIATA proudly represents. It is debatable whether the natural renewal of the fleet is sufficient in view of the improved technology. IMO suggest a number of options are available already at affordable costs; guidelines to support the uniform implementation of mandatory measures to increase energy efficiency and reduce emissions have also been proposed.

FIATA is not in favour of solutions that in practice favour a sort of less-environmentally-friendly service shopping, nor is it in favour of inducing the operators to grapple with tough choices, as they are left to choose between costs and environment. FIATA advocates for a global solution at IMO level. Maritime transportation is a global industry: therefore regional solutions are prone to conflicts and lack of acceptance from third country operators. We also note important distortions of competitions may arise from less than harmonised measures, whose implementation irregularly impacts on sea routes.

A life-cycle approach is required in SC logistics and a reliable and internationally well received emissions' calculation system is prerequisite to rely on comparable data. The IPCC seem to be best placed to achieve these instruments.

Compensation schemes are difficult to come to fruition in an international dimension, but compensations with a more restricted scope do not appear to provide viable solutions.

FIATA does not believe either that a solution to the emission problem in logistics and transport industries may come from any individual measures or from mode-exclusive or regional schemes. FIATA takes however the view that several measures used in combination with an overarching objective may seriously contribute to finding proportionate solutions, especially if assisted by much desired common calculation principles and formulas, which could be developed at UN level.

In addition the area of incentives remains by far and large untapped and offers several opportunities to ignite a virtuous circle in maritime affairs' environmental performance, both in regards of climate change and in other areas of environmental policy.

Industry led initiatives show important results can be obtained by adopting voluntary measures that work both in the direction of improving the environmental performance and business efficiency. In this light awareness and collaboration within the industry and with shippers' are important elements of the puzzle.

The other side of the coin is looking at the results provided by emission trading and charging and taxing policies. The latter are measures that are in place almost everywhere in the world, even though the levels cannot be easily compared. Charging can be good and bad, depending on the conditions, but in the long run it has never showed that it can contain emissions. This one of the reasons why we conclude that many united joint efforts assisted by wise high level international political guidance can give us better results than a myriad of taxes levied with no coordination and the mind fixated on the state deficit or regional schemes that reduce efficiency in much greater proportion than emissions.

Introduction

FIATA was founded in Vienna on May 31st 1926 as a non-profit association. Today it is a non-governmental organisation representing an industry covering approximately 40,000 forwarding and logistics firms, which employ nearly 10 million people in 150 countries.

FIATA has consultative status with the Economic and Social Council (ECOSOC) and a number of UN bodies, as well as recognition in other forums such as the World Customs Organization (WCO), the World Trade Organization (WTO), the International Chamber of Commerce (ICC), the International Air Transport Association (IATA), the International Union of Railways (UIC), the International Road Transport Union (IRU) and many other similar entities. In summary FIATA is the largest non-governmental organisation in the field of transportation with a clear international and worldwide remit and non-profit scope.

Preamble

Addressing the environmental problems created by human activity is now safely mainstream thinking in business management all over the world. This is the consequence of the evolutionary processes that started after WWII and led to many years' research and studies, which revealed that the survival of humans on our planet is at risk, if no action is taken to contain the consequences of human activity on our environment¹. Logistics is no exception and transport activities are among the main contributors to the emissions that so direly prejudice the future of our atmosphere².

Various measures have been proposed, and in some cases implemented, to encourage the containment of emissions after the agreement on the Kyoto Protocol in 1997³. Despite the laudable efforts of policymakers and experts who gathered since then in repeated occasions, no real universal scheme has been adopted so far and we have seen recently that often the results of such meetings leave much to desire⁴. This should

¹ Instructive reading is available in the Stern Review: http://en.wikipedia.org/wiki/Stern_report

² Transport Emissions of greenhouse gases: <http://www.eea.europa.eu/data-and-maps/indicators/transport-emissions-of-greenhouse-gases>

³ http://en.wikipedia.org/wiki/Kyoto_Protocol

⁴ Reference is made to Copenhagen summit, 2009: <http://en.wikipedia.org/wiki/COP15>

actually sound as no surprise, if we consider that the issue of the environmental performance of human activities is the first large scale universal governance problem that all humans are facing in peace time. Needless to say this is a huge challenge for all international institutions and for governments in particular. The current time of recession in the EU and its changing priorities show how quickly these topics may fall from the top of the political agenda, even in those regions which had championed these ideas not so long ago. This means that there are no easy solutions in sight and much work needs to be done. We daresay this needs to be done with a bottom-up approach in view of the governance difficulties that we have experienced, for example in the latest summit which took place in Copenhagen.

FIATA is bound to stick to its remit within transport and logistics and will exclusively deal with such measures as designed to target transport, logistics and related industries. This does not mean that we ignore that powerful containment of emissions may come from other human activities such as agriculture, housing design and architecture, industrial production and energy production; we feel however it is appropriate to leave to the experts in those sectors the opportunity to make comments and proposals.

Measures addressing transport and logistics activities have taken many different formats and could be grouped as containment measures, restriction measures and a combination of elements that is known as “cap and trade”. In addition the policy discussion expanded to contemplate adaptation strategies, whose importance grows as it becomes more and more evident that a certain degree of climate change is now inevitable. This is particularly evident in port areas and in previously inhospitable regions that become all of a sudden available for business.

In this document FIATA shall try to express its views on the issue of emissions in general, at times looking primarily at the issue of climate change and other times looking at wider environmental concerns; it will also underline that certain measures which promise to work well in one direction may instead compromise other achievements. In addition it is worth to mention that this document is principally concerning maritime transport emissions, whilst other surface transport activities such as road and rail transport, as well as aviation, may come into the picture when they offer useful comparisons. This appropriately reflects the multimodal nature of the freight forwarding business.

Discussion on greenhouse gases

FIATA is adamant that the reduction of greenhouse gas emission from global shipping should take place at global level, through measures agreed upon by the International Maritime Organisation (IMO). FIATA is not in favour of regional or local solutions, as these normally end up distorting the market conditions in ways that are difficult to contain or overcome. We have already stated that we identify this issue as a global governance one and this is particularly evident in global industries such as shipping and aviation.

While energy efficiency requirements for certain categories of new ships have been set by the IMO through the energy efficiency design index (EEDI)⁵, no international regulation aiming to reduce GHG emissions from existing ships has been adopted to date. This leaves the industry at no other choice than benefiting from the improvements procured by the natural renewal of the fleet. In time of difficult economic circumstances, as we have seen since 2008, this rate may have slowed down considerably. UNCTAD recently released figures telling us that “after an annual growth of almost 10 per cent, as of January 2012, the world fleet reached a total tonnage of 1,534 million dwt. At the beginning of the year, there were 104,305 seagoing commercial ships in service. Dry bulk carriers saw the largest growth of tonnage, 17 per cent, reaching now a 40.6 per cent share of the world total. This is followed by oil tankers, which grew by 6.9 per cent and now account for 33.1 per cent of the world fleet. The third most important vessel type is container ships, with a share of 12.9 per cent of the world fleet; their tonnage grew by 7.7 per cent during 2011. The general cargo fleet continued its relative decline, being the only major vessel type with a smaller tonnage compared to previous year.” One could speculate how many of those 104,305 seagoing vessels respond to sustainability criteria suitable to reduce emission and how fast the market uptake will allow technology to assist. A different picture emerges in aviation and we shall give account of that later on in the same document.

According to the Second IMO greenhouse gas study dated 2009⁶, a range of technical and operational measures can already be implemented by the maritime sector to reduce its greenhouse gas emissions. Indeed, according to the IMO, the range of the maximum abatement potential of measures at negative cost, i.e. measures which are beneficial even when CO₂ emissions have no price, is 135 to 365Mt of CO₂⁷.

An important series of guidelines to support the uniform implementation of mandatory measures to increase energy efficiency and reduce emissions of greenhouse gases (GHGs) from international shipping has been adopted by the Marine Environment Protection Committee (MEPC)⁸ of the International Maritime Organization (IMO) in 2012, paving the way for regulations to be smoothly and uniformly implemented by Administrations and industry. The MEPC is still discussing market-based measures to reduce greenhouse gas emissions in international shipping.

As already mentioned in the preamble, FIATA acknowledges the consequence of climate change for our society and recognises the responsibility that users of transport services have in helping to reduce their GHG emissions. In order to cut CO₂ emissions, however FIATA, like nearly all other stakeholders in the maritime industry, maintains that a global solution at IMO level is the preferred option. Maritime transport is a global industry: therefore regional solutions are exposed to conflicting pressures and elicit lack of acceptance from third country vessel operators. We also note important distortions of competition may arise from implementing less than harmonised measure that may irregularly affect sea routes.

⁵ <http://www.imo.org/MediaCentre/HotTopics/GHG/Pages/default.aspx>

⁶ http://www.imo.org/blast/blastDataHelper.asp?data_id=26046&filename=4-7.pdf

⁷ http://ec.europa.eu/clima/events/0047/level_reduction_en.pdf

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[http://www.imo.org/knowledgecentre/howandwheretofindimoinformation/indexofimoresolutions/pages/marine-environment-protection-committee-\(mepc\).aspx](http://www.imo.org/knowledgecentre/howandwheretofindimoinformation/indexofimoresolutions/pages/marine-environment-protection-committee-(mepc).aspx)

The technology for CO₂ abatement is available, albeit not always affordable, which is especially true for smaller operators. A solution to reduce the emissions from maritime shipping must avoid leading to distortions of competition (e.g. this is an area where the EU is particularly active both inside the common market as well as in regards of non-EU vessels or ports). Even limiting ourselves to observing the consequences of EU regulations, we can clearly see that some maritime interests are already looking at North Africa. For some this is a region which could allow the avoidance of stricter EU regulations, consequently abating the costs of stricter regulatory compliance. The lack of harmonisation in the legal implementation of these measures, which still lack an international dimension, works in this case as an incentive to less environmental practices.

FIATA is not in favour of solutions that practically assist a sort of less-environmentally-friendly service shopping, nor is it in favour of inducing the operators to grapple with tough choices, as they are often left to choose between costs and environment. In the end this will not be good for the environment and it will also not be good for the business. It may become the source of important detours in the vessels' routing which create additional costs for no reason at all, and instead of protecting the environment, contribute to increasing the overall emissions by extending the journeys.

Nonetheless it is important not to exclude any mode of transport from the efforts to reduce CO₂ emissions. Even if maritime transport accounts to some 90% of the traded goods' volumes and is thus in absolute terms a large source of emissions, in view of a comprehensive and effective life-cycle approach in the Supply Chain, other modes should also be comprised in the calculation schemes in proportion to their part in the SC. In this light FIATA takes note of the positions expressed by other important stakeholders in the industry, who repeatedly voiced their concern for the lack of a reliable carbon calculation system. At the moment most logistics service providers are left to fend for themselves in this area; individual industry solutions are certainly more than welcome, but do not allow reliable alignment, as they do not have a common base to stand on. In other words emissions measured by one can hardly be compared with the results of another operator.

In this direction we take the view that one of the mandates of the Intergovernmental Panel on Climate Change⁹ should be probably expanded. Despite all the laudable work that has been produced in these years, if one consults their website one does not find at first sight the two main items that the private sector would immediately buy into: clear guidance on the start and end points of the supply chains' emissions calculations (e.g. this is known as well-to-wheel approach in petroleum industry¹⁰) and, on those grounds, a reference system which allows logistic businesses to make reliable emissions' calculations. The intrinsic authority of a body such as the IPCC would make such system nearly universal, hence useful to compare results and performance. FIATA believes this would be a giant step in assisting the transport and logistics industry in its efforts to improve its environmental footprint.

Compensation schemes

⁹ <http://www.ipcc.ch/index.htm>

¹⁰ http://en.wikipedia.org/wiki/Life-cycle_assessment

There is a lot of discussion at institutional level and in the private sector about the creation of international compensation schemes that could contribute to resolving the distortions of competition.

FIATA does not wish to state that a compensation fund would be the optimal solution or that it would work per se as a substitute for other international containment schemes, or even that it would work at all. In fact it might even offer a justification for lesser investments in innovation, thus lambasting technological progress. However, if this fund were adopted internationally and administered by a neutral body (an international regulatory body should have an intergovernmental nature), we see that this could encourage governments in those areas of the world that are slower in adopting the desired environmentally observant legislation. In addition such a move would certainly facilitate the creation of a global calculation system.

In a situation where no really universal calculation system has been established many advocate for the adoption of local or limited compensation schemes. In this light the EU has been a trend setter. Some even argued that such attitude would eventually foster a “virtuous cycle” stimulating other governance body to do the same. FIATA does not believe this is conceivable. In fact this might actually accentuate disparity and increase distortions for longer periods of time. In addition, whilst other entities take the view that several compensation funds could provide additional flexibility to the maritime sector and could build on existing partnerships and cooperation, FIATA does not believe this is the right way forward. Besides increasing disparities, implementing several compensation funds might also amplify the administrative burden for the public authorities as well as for the industry.

In other words if compensation has to be, it ought to be universal and based on internationally agreed, transparent rules.

A targeted incentive approach

FIATA would like to see an incentive based approach in place.

Several incentives might be working to elicit the industry towards environmentally friendly measures and, in doing so, towards early adoption. Such benefits should be awarded to those complying with best-in-class rules, as adopted by different governments and should be either freely made available by the state or become available through reductions on compensations and/or bonding schemes, or reduced infrastructure charges. Those who comply with the rules could avail themselves of such incentives, thus receiving direct economic advantages, but even more importantly such qualifications could be used in individual companies’ promotional campaigns as well.

Different mechanisms could be used, for example granting higher monetary compensation for trend setters and early adopters, such as reductions on port charges and port fees, rebates on fuel taxes and harbour environmental taxes. Important tax cuts or subsidies for investments in the newest CO₂ abatement technology could be made available to port authorities, provided their end-use were reflected in transparent rules ensuring reliefs would not be used to cut competition.

Supporting individual companies committed to reducing their CO₂ footprint is crucial: there are multiplying factors in environmental management that can be ignited initially by legal obligations or incentives and later naturally develop into a fully-fledged environmental management solutions that are aligned with the best international standards. These processes often need a kick-start and incentives are working well in this regard.

We have mainly dealt with greenhouse gases so far, but similar mechanisms could be designed to help meet sulphur emission reduction targets, as well as other polluting components.

Coming to sulphur emissions, the discussion inevitably shifts to the area of ECA's¹¹ where a heated debate is heard in many areas of the world. This concerns the difficulties that the North American and the North Sea ECA's create in the maritime industry sailing in those waters. FIATA takes the view that the regulation of sulphur emission is here to stay and its phased-in implementation may or may not be slowed down, however prudence should be guiding the legislator when implementing measures that severely impact on the industry, especially when they combine with other legislation that is already in place. In this line a notable remark has been made public by the Scandinavian forest industry, which alerted the EU on a possible negative modal shift from waterborne to road transport created by the implementation of the ECA in the North Sea. The reasoning behind these remarks uses the often misused concept "more environmentally friendly" modes of transport.

We have seen in the European road transport emissions' regulation that acceleration in one direction may not always be so positive, e.g. we have seen that in switching from EURO III to EURO IV we have indeed contained some emissions, but we increased – albeit marginally – others.

The message that we wish to give is that our industry is ready to go out of its way to welcome the implementation of appropriate legislation if it works well. We are however not happy to be obliged to absorb measures that are based on a less than perfectly sound cost-benefit analysis and rest on scientific grounds that are insufficiently firm and undisputed. A recommendation is required: measures should be comprehensive and include a catch-all principle, so as to avoid that emissions are targeted, and decided upon, one at a time without connections with the entire emissions' schemes' gestalt.

Industry initiatives work

In airfreight the situation we look at suggests much improvement may come from fleet renewal: of the 1237 freighter conversions in service "these figures are falling fast", as reported by IATA in their Airlines magazine (August-September 2012 issue). 210 new freighters are on order and these are "aircraft with superior operating economics and environmental performance." The same IATA source tells us that a large European airline will save some 6867 tons of CO₂ a year by adopting a lighter type of ULD; other airlines are quoted having adopted similar measures. In other words we may expect

¹¹ [http://www.imo.org/ourwork/environment/pollutionprevention/airpollution/pages/sulphur-oxides-\(sox\)-%E2%80%93regulation-14.aspx](http://www.imo.org/ourwork/environment/pollutionprevention/airpollution/pages/sulphur-oxides-(sox)-%E2%80%93regulation-14.aspx)

much better environmental compliance from airfreight in the next few years due to industry led projects.

Other assistance may come from alternative fuel and other industry led initiatives under the umbrella of International Civil Aviation Organization (ICAO), which is committed to produce a proposal to regulate global airline emissions by the end of 2012. This could be a pivotal “step forward and must be supported by the aviation industry and international governments” as suggested by GACAG¹².

Similarly we know that initiatives to incentivise LNG and other more sustainable fuels are at the centre of the debate in the maritime industry, on the one hand in the light of the undisputed advantages that LNG affords in meeting the lowest sulphur emission targets imposed by ECA's, but on the other hand with great concern for the major infrastructural issues that it would raise.

Carriers' transportation is however not the only activity in the logistics SC. Cargo handling and warehousing in 2012 looks very different from what it did some twenty years ago. Most cargo handling equipment is running on power coming from alternative sources, at least where these are made available by the supplying networks, with notable examples in Denmark and Switzerland.

Our European colleagues of CLECAT have been publishing a sustainable logistics best practice guide¹³ since 2009, which was received by FIATA and acknowledged at the level of the Multimodal Transport Institute. Whilst we do not have more precise data at hand, we have anecdotal evidence from our own membership that some of our companies managed to introduce important savings both in their business costs as well as to improve their environmental footprint by adopting some of the measures promoted by the guide. Some quoted that the mere fact that all these measures were assembled under one umbrella made it possible to compare and choose easily, which saved considerable efforts and time.

We shall not expand further on this point, but we strongly encourage the reader to take a look at this published guide which enumerates many industry-led initiatives.

Emission trading schemes

The European ETS interconnects and regulates the trading of emission certificates. It is acceptable that certificates are bought and sold across industries, as this would still contribute to achieving the aim of the EU wide reduction of CO₂ emissions. This is the extreme essence of what the EU ETS is. The principal objection that the ETS has received obviously consists in questioning the likelihood of the alleged achievements and in saying that the ETS would rather contribute to diverting much of the sea-going (and aviation respectively) from the EU to areas where such a scheme is not in place. This would bring no environmental advantage and simply create artificial detours and additional costs where none should be.

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<http://www.gacag.org/images/gacag/PressReleases/GACAG%20calls%20for%20industry%20and%20government%20support%20of%20ICAO%20commitment%20to%20produce%20global%20airline%20emissions%20proposal%20by%20end%20of%202012.pdf>

¹³ <http://www.clecat.org/ongoing-projects/logistics-best-practice-guide.html>

EU citizens are obviously free to decide to be trend setters and early adopters, but we know that this is an expensive path and sometimes it does not produce globally acceptable results.

The costs of ETS could be easily passed on to the customer and this should be done in accordance to precise rules. The ETS however does not make the user aware of the GHG emissions of the different carriers' ships if they were to be reflected in differential pricing strategies. If ETS were chosen over other methods, it should be a global rather than a regional scheme, or else, as we have argued before, a distortion in the trade and/or a competitive advantage to non-participating countries might ensue. In addition important detours would be created with a conceivable increase in emission instead of abatement. For the sake of truth we must say that the aviation industry has not been offering a much better example and we all know a number of airlines have been under scrutiny for their surcharges policy. In the past logistics service providers have also been using such surcharges probably in a way that exceeds the immediate requirement of exceptionality and unavoidability.

The issue of adopting ETS's has often been a case of the step by step approach. However in FIATA's opinion this is not always the ideal solution. Governments generally proclaim that the principles of proportionality and appropriateness oblige them to deal with one issue at a time, but implementing charging schemes in subsequent waves on different modes of transport without an overarching guiding policy for all modes is hardly suitable for industry planning. If the ETS is the preferred way to tackle the problem, it is necessary to extend comparable ETS schemes to all transport modes and industries in order to prevent further distortions of competition and unfriendly modal shift. The rules may also need to be aligned; the allocation of allowances must reflect the same principles; market prices and the cap & trade paradigms must take account of the market share occupied by each mode of transport. These complex arrangements need to have an international dimension and this does not make it an easy task.

In many instances duties, excise, tolls and other form of charging are the immediate answer to address environmental issues such as those posed by excessive emissions in the atmosphere.

Charging, taxing and the final cost for the end user

Road charging, bridge and tunnel tolls and other forms of charging such as fuel tax or excise are very widely adopted in the world and mostly they are based on the user-pays principle, as well as, more recently, on the polluter-pays principle¹⁴. Such charging schemes are now widely used and when implemented correctly to improve the level of infrastructure have produced quite remarkable results; for example both the Gotthard and Lötschberg tunnels were built in Switzerland between the end of last century and the beginning of this century also thanks infrastructure charging schemes and very strict earmarking, which contributed to providing sufficient funding for their construction.

¹⁴ The OECD offers a simple and practical definition at:
<http://stats.oecd.org/glossary/detail.asp?ID=2827>

There are however not so virtuous examples as well. We have seen congestion charges being levied out of the self-inflicted congestion created by the insufficiency, or the lack of adequate infrastructure. In these examples the incentive to divert the revenues away from the improvement of the infrastructure is visible. If the infrastructure is improved the congestion revenue would diminish or cease. The recent disputes about the London congestion charge and the discussion on the internalisation of external costs in the EU that led to the adoption of the so called “Eurovignette” directive are rich in examples and quotes, some pointing towards good practice and some other unfortunately failing to do so.

When in the domain of the deep sea or the air, other than the case of Russia which imposes a fee for flying over its territory, most charges and taxes are levied either at the pump (or any other energy source) or at the interface with land (ports and airports). We daresay these charges cannot be imagined to be more diverse and difficult to compare and approximate.

The feeling operators have is however that these charging schemes are seldom justified either by the improvements in infrastructure or the general benefit for society at large; at least this is what FIATA hears from its membership and other stakeholders. Normally these charges are passed on to the final user through the supply chain, more often than enough as “surcharges”, as though they were additional and external and not part of the foreseeable business costs, and this is done without the transparency one would expect in passing a cost that is not “owned” by the industry. The shipping sector in particular has often passed new costs on to its customers as non-transparent surcharges.

Talking of fuel taxes is difficult, as data is not abundant or readily available. Most governments in the world impose taxes and excise on fuel and these significantly contribute to their budget. Hence they are not happy with anybody to even investigate the amounts that fuel excise convey into the cash of finance ministers. In 2010 a preliminary study limited to 4 EU countries published by CLECAT produced some extraordinary figures¹⁵.

While we agree that a fuel tax could help to contain or decrease emissions, we do not think that this is the appropriate method to reduce emissions in the long run, i.e. by endlessly raising the excise percentages, as some ecologists advocate for. In addition there is no universal taxation scheme for fuel and we do not think it is even conceivable that there would ever be one in place.

As mentioned before the shipping industry has a long tradition of passing-through cost to the end customer via surcharges. Passing on the carbon costs to their customers via a bunker levy would remove the accountability of the shipping industry without reducing carbon emissions. Ships may re-fuel in ports where no legal jurisdiction exists to claim a fuel-related emissions tax on fuel bought in another country. Also some ship operators and their customers may tranship at neighbouring ports to avoid the tax altogether. It would become an administrative burden determining where ships had arrived from and what cargo was loaded when en route. National variations in the rate of tax or the levy could distort competition. Non-participating port states and their industries would gain a competitive advantage. All these elements tell us that such a scheme would not work in

¹⁵ <http://www.clecat.org/dmdocuments/pp010oetro101014eurovclecatexcerpt.pdf>

maritime transport and even less so in aviation, where some countries grant a total exemption of taxes to their aviation sector.

Fuel charges are fairly effective in internalising external costs almost exclusively on the road, because of the evident physical constraints trucks are bound to run through, with limited or no choice to benchmark fuel prices on the run, hence the inevitable absorption of tax and excise as levied in each transit country.

Conclusions

FIATA does not believe a solution to the emission problem in logistics and transport industries may come from individual measures, mode-exclusive or regional schemes. Several measures used in combination with an overarching objective may seriously contribute to finding proportionate solutions, especially if assisted by much desired common calculation principle and formulas and sufficient incentives.

Such common calculation schemes would assist the industry in its efforts and foster a bottom-up approach in any other intervention areas such as taxation, charging and eventually, containment measures. In this endeavour FIATA believes the role of the IPCC could be decisive. Well grounded non-punitive policy can work much faster in the short run than any global agreement that is not within reach at present.

FIATA advocates for a global solution at IMO level in the maritime sector and at global coordination at UN level with other transport modes,. Maritime transportation is a global industry: therefore regional solutions are prone to conflicts and lack of acceptance from third country operators, eventually creating distortions, waste of resources and additional emissions.

Over and above any containment measure FIATA would always prefer an incentive-based system, rather than a punitive one. Incentives are simple to administer and transparent to all parties, while not requiring universal agreement or implementation to begin with. Incentives may even survive the difference of calculations and data, as it ignites an emulation process rather than fostering distortions. In principle it creates no harm to the economy.

The objective should be to reduce transport's contribution to the overall GHG (and other) emissions, not to raise revenues. Industry is already contributing to GHG emission reduction programmes in many parts of the world (e.g. under the EU ETS). Raising the costs of shipping will drive transport buyers to alternatives, the net effect of which may result in even more emissions of GHGs, not less.

Incentives for reducing emissions need to be given to operators who show credible credentials in fuel saving, alternative energy use and employing appropriate life-cycle programmes that allow for measurable and significant results. Transport users can invest in transportation equipment which has less impact on the environment, but only if one can measure its effect and benefit reliably one can claim that the full life-cycle of the supply chain offers overall environmental advantages.

In this light collaboration between different segments of the supply chain services should be promoted, as is normally the case in modern logistics business processes.

Collaborative initiatives between stakeholders should aid the development and sharing of knowledge and experience about best practices, which may yield economically viable environmental benefits. Additional support should be given towards the promulgation and promotion of such practices. Policy makers should work together working with the supply chain stakeholders in determining and facilitating the most effective ways of doing this.

An important part of this action concerns the awareness raising that needs to be deployed in on the shippers' side. Whatever efficiency may be gained by improving the environmental process in logistics, shippers should be made aware that this kind of success does not come easy or cheaply. It requires massive investments and adjustments that often need their cooperation to come to fruition. Without the cooperation of the cargo interests any programme intended to address emissions in the SC would be pointless.

Many united joint efforts coordinated by wise, high level international political guidance can give us better results than a myriad of taxes levied with no coordination and the mind fixated on the state deficit.