WBGU
German Advisory Council on Global Change

policy paper

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Charging the Use of Global Commons

Contents

1 Introduction: User charges to promote global sustainability

In the run-up to the United Nations International Conference on Financing for Development (UNFfD) due in March 2002 and the World Summit on Sustainable Development (WSSD) due in September 2002, the question of how to finance global sustainability policy is moving to the centre of attention. The problems of global change are mounting (WBGU, 2001), and the international community is increasingly pronouncing its willingness to tackle these problems in a cooperative fashion. However, the question of how to raise the necessary financial resources has not yet been resolved satisfactorily.

This affects, among other things, the ambitious development goals set by the United Nations at the Millennium Summit in September 2000. These goals include, above all, halving by 2015 the proportion of the world's people living in extreme poverty, but also improving access to potable water and basic health services, achieving universal primary education and preventing a further spread of HIV/AIDS. Whether these and other sustainability goals can be achieved is called into question not least by stagnating official development assistance (ODA) budgets.

These problems are on the agenda of the UNFfD conference, which will take place in Monterrey, Mexico. The developing countries expect substantial commitments by the industrialized countries to increase resource transfers and to implement promptly the goal of making available to developing countries 0.7% of industrialized-country gross domestic product for official development cooperation activities. If no agreement to increase financial transfers from North to South can be found, the success of the WSSD in Johannesburg also appears endangered. However, the UNFfD will also tackle, in addition to official development finance, other topics such as mobilizing domestic financial resources, private capital flows, international trade, mitigating the indebtedness of developing countries and reforming the international financial system. The question of official development finance thus needs to be examined within the context of this comprehensive agenda. Besides increasing the financial resources for official development cooperation, this is also a matter of creating appropriate institutional framework conditions at national and international levels so that private-sector and public-sector sources of finance can be harnessed increasingly for concerns of international environment and development policy.

The German Advisory Council on Global Change (WBGU) wishes to contribute to the debate in this area. The Council has already addressed these questions in its 2000 annual report "New Structures for Global Environmental Policy", proposing, among other things, the levying of charges for the use of certain global common goods ('global commons') such as international airspace and the high seas (WBGU, 2001). In that report, the Council also noted the possibility of introducing international payments for non utilization obligations in order to safeguard national resources whose conservation is of common global concern.

In this policy paper, the Council summarizes the key findings of its special report on user charges within the framework of global sustainability policy (WBGU, 2002), and makes recommendations for a politically viable implementation of the concept of global user charges for three specific areas of application:

– Charges on the use of airspace by aviation,
– Charges on the use of the oceans by shipping,
– Payments for non utilization obligations.

2 Fundamentals of the concept of user charges

The global common goods of international airspace and the high seas are 'open access goods' – for which property rights cannot easily be allocated. Where common rules of good practice in the use of these goods are not agreed upon, there is a danger of over-exploitation because the users need not bear the full social costs of their actions. These global commons would thus need to be administered in trust by the international community.

It is at this point that the concept of user charges comes into play. The aim of raising a charge is to close regulatory gaps that lead to the overexploitation of global common goods. The charge makes a connection between the use of environmental resources and use-related impairments. The scarcity of a resource and the costs of its provision are signalled to users through the payment they must make. This generates incentive effects reducing environmental pressure (the incentive function of user charges). Furthermore, user charges mobilize additional financial resources that should be earmarked to finance the conservation and restoration of global common goods (the financing function of user charges).

The charges should be lowered if pressures on the environmental resource decline. This close connection with environmental protection is pivotal to the concept of user charges and has a certain proximity to the concept of 'public charges' used in public finance. The concept of user charges is thus distinct from taxation, which makes no direct connection between the payment of a tax and the service to be financed.

The example of the use of international airspace illustrates the functions of user charges: The level of charges must take into consideration the contribution of aviation to global greenhouse gas emissions and the associated climate damage. The user charges create economic incentives to reduce greenhouse gas emissions by means of improved technologies and changes in behaviour on the demand side. The revenue generated should be earmarked to finance global climate protection policy. Earmarking means in this instance that the financial resources should be spent to finance measures aiming to conserve and restore the quality of the public good 'climate' and to finance measures aiming to promote adaptation to climate-related damage.

User charges also have desirable distributional effects. Those who use environmental resources most make, by paying a user charge, the biggest contribution to financing the protection and conservation of global commons. At the same time, the way in which the revenue is spent can generate desirable distributional effects at international level. The use of the financial resources should favour those countries which are particularly affected by the environmental damage resulting from the use of airspace or the oceans and have a low economic capacity.

An advantage of user charges is that political resistance can be overcome more easily if the use of revenue is earmarked and can be seen in connection with the resource utilized. This has particular relevance when implementing the approach at international level. The approval by developing countries of a system of global user charges will doubtlessly be gained more readily if disbursements are earmarked for global sustainability policy measures than if revenues are spent without earmarking.

3 Charging the use of airspace by aviation

Environmental impacts of aviation

The principal emissions arising from aviation are carbon dioxide (CO_2), nitrogen oxides (NO_X), carbon monoxide (CO), hydrocarbons, water vapour, sulphur oxides (SO_X) and aerosol particles. Within the context of raising charges on the use of international airspace, only the impact on climate is to be taken into consideration as a global environmental impact. For this, not only the emissions of the greenhouse gases CO_2 and water vapour are relevant, but also the impacts of NO_X, SO_X and aerosol emissions upon ozone and methane (CH_4) concentrations and upon condensation trail (contrail) formation. The overall present climate impact from historic and present aviation is about twice the radiative effect of CO_2 emissions from aviation. It is important to note that a reduction in some greenhouse gases from aviation may possibly result in an increase in other, equally harmful emissions. For example, curbing fuel consumption reduces CO_2 emissions but tends to promote the formation of NO_X.

Aviation is the source of greenhouse gas emissions with the strongest worldwide growth. The IPCC estimates aviation's share in anthropogenic climate change in the year 2050 to amount to approx. 3.5–15%, depending upon the scenario chosen (IPCC, 1999). As a medium-term trend, i.e. despite the events of 11 September 2001, it is anticipated that the emissions of CO_2 from aviation will treble between 1992 and 2025. Between 1990 and 2050, the proportion of the total volume of passengers choosing to travel by air is expected to quadruple from 9% to 36%. The sharp growth in demand for air transport can be explained by the rise in gross domestic product in various regions of the world as well as by population growth, a sharp rise in long-haul tourism and generally high mobility and longer distances travelled.

Regulatory gap in international aviation and the raising of a user charge

Despite their substantial climate effects, the CO_2 emissions of international aviation are not subject to any quantitative reduction 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 as a matter of urgency.

The Council recommends to the German government that this regulatory gap should be closed by intoducing a 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 incentive 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 the least possible emissions.

Designing a user charge

There are various options for designing a user charge on aviation. User charges can increase air transport prices directly in the form of a ticket levy, they can be based upon kerosene consumption or aircraft emissions, or they can be implemented in the form of tradable emissions permits.

User charge schemes that create appropriate incentives on the supply side to reduce environmental impacts while at the same time generating additional financial resources are of particular benefit. While the blanket increase in air transport prices produced by a ticket levy creates only slight economic incentives to reduce environmental impacts, both a kerosene levy and an emissions-based levy generate significant environment-related incentive effects. Compared to a kerosene tax, an emissions-based levy has the advantage that opportunities for evasion are more limited and potential revenue is thus higher. In particular, the practice of 'tankering' (refuelling kerosene at airports in countries not subject to the levy) greatly diminishes the potential revenue of a kerosene levy and generates additional negative envi-

ronmental impacts due to greater flying weight and detours flown. A further advantage of emissions-based user charges is that they make it possible to give explicit consideration to different types of emissions. Tradable emissions permits have the drawback that significant financial resources would only be generated if the permits were auctioned. Yet, an auctioning of permits is bound to hit political resistance.

Consequently, the Council recommends to the German government that it promotes at international level the introduction of an emissions-based user charge. This should ideally be designed in a way that the rate of the levy is determined by the aircraft type, engine type, (average) air route, distance and load – a 'calculated emissions levy'. The precise design of an optimized charging scheme should be determined by international institutions. In order to minimize resistance against introduction of such a charge, the Council recommends commencing initially with a moderate levy rate. This applies particularly in the case of EU-wide introduction in order to avoid excessive competitive disadvantages for the European aviation sector. The further rises of the rate dictated by climate protection considerations should be set in a fixed time schedule in order to both enhance the environmental incentive effect on a continuous basis and to permit long-term calculation for the aviation sector.

The International Civil Aviation Organization (ICAO) is an institution that could play an important role in collecting an emissions-based levy. For this, however, ICAO would need to be integrated more closely into global environmental protection structures than has been the case until now. Given the political will environmental policy objectives could be given greater importance in ICAO vis-à-vis the particularistic and short-term economic interests of individual countries. For instance, it would be conceivable that the parties to the Climate Convention and the Kyoto Protocol call upon ICAO to set binding targets for the reduction of greenhouse gas emissions from aviation. As it may be assumed that ICAO has an interest in establishing a regime within its own organizational structures, this would give incentives to start elaborating an emissions-based user charge regime without delay. Alternatively, the CO_2 emissions of the aviation sector could be integrated into the Kyoto Protocol.

Level and use of revenue

Various IPCC scenarios estimate the share of aviation in radiative forcing from anthropogenic greenhouse gas emissions to amount to 3.5–15% in the year 2050 (IPCC, 1999). A conservative estimate of climate-related damage (including adaptation costs) and avoidance costs (e.g. for emissions abatement) suggests total costs of some € 100–200 billion annually. The share attributable to aviation would then figure about € 3–30 billion annually. Although this estimate of climate-related damage is subject to many uncertainties, it can be assumed that a calculated emissions levy – at its maximum level at the end of a step-by-step increase of the levy rate and given worldwide introduction of the levy system – could indeed generate revenue of that magnitude.

The revenue should be spent to restore and conserve the quality of the global good to be protected, i.e. the climate. This would mainly entail the prevention of greenhouse gas emissions in sectors other than aviation. More specifically, these could be measures to improve energy efficiency or to intensify the use of renewable energy sources.

Furthermore, measures to adapt to or 'repair' climate-related damage would need to be financed. Here care needs to be taken that the connection between damage for which adaptation measures are to be financed and the climatic changes causing the damage is as close as possible. Coastal protection measures such as dike construction in response to climate-related sea-level rise are an example of measures closely connected to climatic changes ('first order' climate damage). Revenue loss suffered by countries whose touristic attractiveness declines due to climate-related damage (e.g. through the degradation of coral reefs) is an example of damage further removed from the initial cause in the causal chain of climate impacts; even social disruption (e.g. rising levels of criminality) is part of this chain. These are cases of 'higher order' climate-related damage.

Whether and with which priority measures to repair higher order damage should be financed from the revenue of user charges remains open to debate. To determine the scope of earmarking, there is a need for criteria; these must be formulated through intergovernmental negotiations, building upon further research activities.

Financial resources should be spent primarily to countries that have explicit climate policies, experience high levels of environmental damage attributable to aviation-related air pollution and have low eco-

nomic capacity. Adequate consideration needs to be given to the efficiency with which resources are spent. With this in mind, financing could be mainly programme- or project-focused in the countries that are fundamentally eligible for support.

As concerns the administration of spending, the Council recommends entrusting existing international institutions in the climate protection sphere with the greater part of the revenue. The three new funds agreed at Marrakesh within the climate regime, i.e. the Special Climate Change Fund, the Adaptation Fund and the Least Developed Countries Fund, are particularly suited for the disbursement of the revenue. Some of the financial resources might be allocated directly to the climate window of the Global Environment Facility (GEF), which is the financing mechanism of the Climate Convention. Care needs to be taken that enough attention is paid to compensating for and repairing the specific damage caused by emissions of greenhouse gases by aviation. In addition, it must be ensured that existing GEF funding is not reduced as a consequence of the new source of funding.

With regard to political enforceability, it would presumably only be possible to implement a model which permits the revenue from the user charges to be allocated to both national and international institutions. What percentages of the revenues are to be allocated to the two categories of recipients would have to be negotiated at the international level. Possible criteria for deciding on the percentages might be, for example, the extent of national damage as a consequence of climate change as well as the economic capacity of the various countries. In principle, however, at least in the medium and long term, the majority of the funds should go to international institutions. Institutions hosting such negotiations could be the conferences of the parties to the Climate Change Convention and Kyoto Protocol. With regard to the political enforcement of appropriate mechanisms for disbursement of the revenues from user charges, the Council considers it indispensable to conduct an evaluation of previous climate policy experience.

RECOMMENDATIONS

- Introduce an emissions-based user charge in order to close prevailing regulatory gaps at the global level. If this is not politically enforceable, the user charge should initially be introduced within the European Union.
- Collect a global user charge through the ICAO, which should be integrated more closely into global environmental regimes.
- Introduce a user charge with a steadily rising levy rate.
- Earmark revenue for the restoration and conservation of the quality of the global resource that is to be protected – the climate. In addition to measures to prevent greenhouse gas emissions in other sectors, consideration may also be given to financing measures for adaptation to climate-related damage.
- Allocate the financial resources primarily to international institutions, notably the three new funds established under the Climate Change Convention and the Kyoto Protocol (the Special Climate Change Fund, the Adaptation Fund and the Least Developed Countries Fund), and directly to the climate window of the GEF.

4 Charging the use of the oceans by shipping

Environmental impacts of shipping

Despite intensified efforts to protect the oceans in recent years at both international and national level, their condition continues to deteriorate. Marine and coastal ecosystems are under particular pressure from inputs of pollutants, nutrients and sediment particles. Shipping is, over long distances, by far the most environmentally sound form of transportation. In particular, it is much more energy-efficient than aviation, which gives rise to up to 100 times higher CO_2 emissions per tonne of freight. Nevertheless ocean shipping is still a significant source of marine and air pollution with CO_2 emissions also contributing to anthropogenic climate change.

Oil discharges by shipping cause, at least locally, considerable pressure upon the ecosystems affected. Tributyl tin (TBT) released from anti-fouling paint, which is intended to protect ships' hulls from the growth of marine organisms, accumulates in the sediments of the seabed. Its hormonal effects may, for example, lead to sex changes in marine snails. Non-indigenous species are introduced to distant ecosystems by the uncontrolled exchange of ballast waters. Under certain circumstances this may have a destructive impact on biological diversity in the new host ecosystem and lead to considerable economic losses.

In addition to these discharges to the oceans, shipping also emits pollutants to the atmosphere. Shipping is responsible for around 7% of the CO_2 emissions from the transport sector or for around 2% of global CO_2 emissions. Furthermore, around 7% of all sulphur dioxide (SO_2) and 11–12% of all nitrogen oxide (NO_X) emissions may be attributed to shipping.

Regulatory gap in ocean shipping and the raising of a user charge

The high seas are not subject to the legal sovereignty of any state. Even after the entry into force of the United Nations Convention on the Law of the Sea (UNCLOS), the use of the high seas for transportation remains a classic example of a global open access good. An inseparable ecological connection exists between coastal waters and the high seas. Mounting global degradation of the ecosystems of coastal waters is threatening to extend to the high seas and even to the deep sea. Therefore, the Council considers it justified to classify the oceans as such, including the territorial coastal waters, as a scarce global common good – regardless of their legal allocation to the different levels of national sovereignties established in UNCLOS. Consequently, the introduction of user charges needs to be considered in order to close the prevailing regulatory gap.

Levying user charges creates incentives to reduce shipping-induced marine pollution. In view of the relatively good environmental performance of ocean transportation and its significance for world trade, the primary aim of such a charging scheme is not to reduce the volume of ocean transportation. The aim is rather to create an incentive for measures to be taken, particularly in the areas of technology and environmental management, to reduce shipping-induced marine pollution. The Council considers it appropriate to pursue an integrated approach, including environmental impacts which are only indirectly related to marine pollution, in particular CO_2 and SO_2 emissions caused by shipping. The financial resources generated should be earmarked for measures to conserve and restore the quality of the oceans.

Designing a user charge

The Council proposes raising a charge that is collected annually and is differentiated according to ecological criteria. Proceeding from a base rate, rebates could be granted as a function of the general quality and also environmental quality of ships. Important criteria in this regard comprise shipping company policy (including environmental management), ship design, construction and equipment and the management of operations on board ship. The base rate would be determined as a function of ship tonnage (tdw), ship engine power (kW) and a charge factor. This factor would be set depending upon the level of revenue targeted and upon the environment-related incentive effect desired.

In the opinion of the Council, user charges should initially only be raised in industrialized countries. Interested developing and transition countries could then possibly join the system at a later stage. However, the system should cover all ships – regardless of flag state and seat of the shipping company. As the greater part of ocean shipping starts or ends within industrialized countries, the majority of shipping can be covered in the ports. Raising user charges may also serve – if funds are spent accordingly – as a clear signal of the willingness of the industrialized countries to contribute to financing global sustainability. In view of the unsatisfactory results achieved to date in negotiations on improving environmental standards for ships under the auspices of the International Maritime Organization (IMO), the Council recommends establishing such a user charge system within the framework of the OECD. In the past the OECD has developed a range of activities in the shipping sector. Close cooperation with the IMO would be essential in order to avoid contradictions and overlap with IMO activities. The development of a catalogue of criteria by the OECD could provide important impulses for the swift (further) development of binding environmental standards by the IMO.

Level and use of revenue

Applying the charge factor recommended by the Council for the initial phase and assuming initial EU-wide introduction, annual revenue would amount to € 360–720 million (minus the rebates for environmentally sound ships).

In order to make the connection between the raising of the charge and the use of revenue, the funds spent must benefit marine conservation. A first approach would be to use funds directly to mitigate damage caused by shipping. This, however, is hampered by various problems, such as localizing the environmental impacts of shipping. The Council therefore suggests widening the scope of earmarking: Revenue should be spent to protect the oceans in their entirety. In light of the interplay among various environmental influences and the complexity of marine ecosystems, an effective protection of the oceans and particularly of coastal waters can only be achieved if all relevant impacts are taken into consideration. Consequently, the Council takes the view that the financial resources generated by the user charge should be spent mainly for integrated coastal management in order to reduce the adverse effects of all uses of the oceans to an environmentally acceptable level.

Because developing and transition countries lack the resources to develop and implement integrated coastal management, the Council considers it appropriate to use the available funds primarily in these countries. The efficiency of spending is a further argument in favour of this. It can generally be assumed that developing and transition countries have the largest potential for a comparatively cost-effective reduction of impacts upon the marine environment. In addition, such a spending lends a development policy element to the scheme which promises to enhance the political enforceability at international level.

The administration of the funds can build upon existing international structures. At the project level, funds should be administered by the GEF, whose operative programmes already cover the marine environmental protection sector. The principle of limiting support to 'agreed full incremental costs' should be adhered to in this instance. The substantive specifications for allocating the funds should be deter-

RECOMMENDATIONS

- Introduce, within the OECD and in consultation with the IMO, a user charge that is collected annually and is differentiated according to ecological criteria. If this is not politically enforceable, the user charge should initially be introduced within the European Union.
- Use revenue to restore and conserve the marine environment, especially through measures carried out in developing and transition countries.
- Award funds primarily through the GEF, substantive specifications for spending being determined by the Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (GPA) and the Biodiversity Convention.

mined in accordance with the Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (GPA). Close coordination with the Biodiversity Convention would also be recommendable. There are already funds for marine environmental protection projects within the context of GEF activities.

In addition, a part of the revenues should be spent to finance the expansion of port state control in participating states. This could establish stronger monitoring of the implementation of existing environmental standards and, moreover, would serve as an incentive for countries outside the OECD to participate in the system of user charges.

5 Payments for non utilization obligations

The concept

In contrast to the two forms of user charges set out above, the concept of non utilization obligation payments (NUOPs) does not address 'global common goods', but national-level 'goods of global value' whose conservation is a common concern of humankind. These can be, for instance, the conservation of biological diversity or of land and freshwater areas. These goods fall clearly under the sovereignty of states. In that sense, there is no regulatory gap. Nevertheless, the way in which the management of these goods is presently regulated endangers the conservation of biological diversity, for example, because for many states the – in some instances poverty-induced – degrading of their natural resources generates (over the short term) higher yields than the provision of the good 'conservation of biological diversity'. Here the concept of NUOPs comes into play. Under the concept, abstaining from degrading use is rewarded by payments in order to provide financial incentives for the conservation of environmental goods of global value.

User payment schemes thus also make sense for national-level environmental goods whose conservation generates global benefit. The users of services resulting from the conservation of these global goods would have to pay for that use – be it the use of ecological functions or of the existence value. In order to ensure that the environment-related incentive effect trickles down to the level at which degradation takes place, funds should be spent at least in part to provide compensation for those who would have derived income from a degrading use. This would also do justice to poverty-induced environmental problems.

Designing a system of payments for non utilization obligations

The NUOP approach is not restricted to situations in which all kinds of local use are to be abstained from. Certain forms of commercial use can be permitted explicitly if they are compatible with the conservation of the good. NUOPs are therefore consistent with the ecosystem approach of the Biodiversity Convention, which integrates the conservation and sustainable use of biological diversity.

For the concrete implementation of NUOPs, various models are conceivable. Besides bilateral or multilateral negotiations, it would be possible, for instance, to establish markets for non utilization units (e.g. tradable conservation credits, TCCs) and to boost private-sector demand for tradable non utilization obligations by providing tax or other incentives. A worldwide system of non utilization commitment certificates (NUCCs) is also worth considering. Such a system presupposes that – ideally all – states agree not to degrade a certain minimum amount of valuable natural area. Countries whose sovereign territory harbours only few valuable natural areas could honour their undertaking by purchasing NUCCs. These certificates would need to be covered by non utilization units of those countries that have a 'surplus' of valuable natural areas. When issuing the initial certificates, consideration would need to be given not only to the proportionate benefit derived by a country from the conservation of the global environmental resource, but also to that country's economic capacity and physiographic endowments. Poorer countries whose territories harbour no or very few valuable natural areas can hardly be expected to use their scarce financial resources to purchase tradable NUCCs. From an economic perspective, the attraction of the tradable NUCCs approach lies, as with tradable emission permits, in the high level of efficiency. Moreover, this approach would create an automatic financing mechanism for the conservation of environmental goods of global value.

Preconditions to operationalization and research needs

To make NUOPs operable, numerous preconditions must be met and unresolved research issues clarified. For instance, it needs to be determined who is entitled to use the natural areas in question, which forms of local use are allowed, i.e. can be considered sustainable, who the payers are and who the recipients of payments.

When implementing a NUOPs system, it is essential to be aware of the risk of 'moral hazard'. This refers to situations in which, if it is known that local non utilization will be compensated for, degrading local uses of environmental resources are pursued all the more in order to drive the level of compensation payments upwards. Moreover, compensation payments must not lead to local environmental resources only being conserved in exchange for international funding, which would weaken countries' own responsibility vis-à-vis the natural environment and future generations. This danger is smaller in a tradable NUCCs system than in 'ordinary' compensation payment systems because every country participating and endowed with the relevant resource must initially undertake a commitment to ensure the conservation of at least a certain quantity of the resource in question without receiving any payment for this undertaking.

Resolving the above issues and meeting the preconditions for operationalization will be time-consuming and will require a lengthy process of consultation. The Council is nonetheless convinced that the idea of a global system of tradable NUCCs is worth pursuing as an alternative to other financing mechanisms such as a tropical forest fund. The Council therefore recommends raising the profile of NUOPs or tradable NUCCs on the international policy agenda and intensifying research activities in this field.

The Convention on Biological Diversity (CBD) provides an international arena in which pilot projects could be conducted and unresolved issues clarified. The Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) of the CBD has already elaborated recommendations – focussing specifically on forest biodiversity – for the establishment of protected area networks. The strategic decision in favour of an 'international ecological network' is already being called for in various quarters and may be taken by the CBD COP-6 in April 2002. This would also provide an opportunity to put NUOPs and the concept of tradable NUCCs on the agenda and to examine to what extent these instruments could be operationalized through the GEF, which is the financing mechanism of the CBD.

RECOMMENDATIONS

- Advance the international debate on non utilization obligation payments (NUOPs).
- Intensify research relating to NUOPs, particularly with regard to a worldwide system of tradable non utilization commitment certificates (NUCCs).
- Examine the options for implementing NUOPs and tradable NUCCs, for instance within the framework of the Biodiversity Convention.

6 Conclusions: Implementing the concept of global user charges

The Council is aware that to implement the innovative instruments discussed here a major effort is needed to convince the relevant actors. In the view of the Council, the concept of user charges, owing to its environmental incentive function in combination with its financing function, should constitute a significant pillar of global sustainability policy. By presenting recommendations for a politically viable implementation of the concept of global user charges, the Council aims to stimulate the German federal government to look beyond day-to-day politics and seek to close prevailing regulatory gaps at international level.

Care needs to be taken when implementing the concept of global user charges that the financial resources which can thus be generated do not lead to the funds available for development cooperation activities being reduced. Even today, a considerable proportion of official development assistance (ODA) goes towards the creation and preservation of global public goods, notably those in the environmental sphere. The United Nations Development Programme (UNDP) estimates this proportion at about 25%. Methodological problems in calculating such proportions aside, it is clear that the pressure on development cooperation funds allocated traditionally to development purposes could be reduced substantially by levying user charges. The Council recommends factoring the financing contribution of user charges out of ODA. The revenue of global user charges would then correspond to an imaginary budget item, namely 'Global sustainability policy'. The availability of additional financial resources for global sustainability policy makes it possible to use development cooperation funds in a more targeted manner for the 'classic' tasks of development cooperation. This approach would achieve true additionality of the revenue generated by user charges.

A final point that needs to be taken into consideration with regard to implementing the concept of global user charges is the aversion of the industrialized countries to the restriction of their financial sovereignty by the earmarking of user charges and their disbursement by international organizations. However, the United Nations International Conference on Financing for Development (UNFfD) may provide an opportunity to reduce this resistance on the basis of the conference's focus on the North-South context and its importance for the World Summit on Sustainable Development (WSSD). The Council therefore recommends to the German federal government that it seizes the opportunity of Monterrey by arguing in favour of implementing the forms of user charges set out in this policy paper.

RECOMMENDATIONS

- Introduce global user charges in order to gain both an environmental incentive effect and a financing effect.
- Use the revenue generated by global user charges as truly additional financial resources for the financing of global sustainability policy.

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Institute of Shipping Economics and Logistics (ISL): Nutzung der Hohen See als Transportweg – Möglichkeiten zur Erhebung von Entgelten. Bremen: ISL.
Prof Dr Paul Klemmer and PD Dr Rüdiger Wink, Ruhr-Forschungsinstitut für Innovations- und Strukturpolitik e.V. (RUFIS): Nutzungsentgelte als Bestandteil der Finanzierung globaler Umweltpolitik. Das Fallbeispiel Meeresschutzpolitik. Bochum: RUFIS.

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