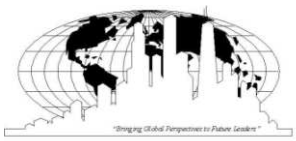

American Model United Nations

Economic Commission for Europe

Economic Commission for Europe

Report to The Economic and Social Council on Climate Change Mitigation and Adaptation

DOC:186

Table of Contents

Executive Summary

In the sixty-second session held on 19-22 November 2011, the Economic commission for Europe considered the topic of Climate Change Mitigation and Adaptation and discussed possible policies and programs to address this issue.

On the subject of Regulatory Structures, the ECE considered four popular ideas for reducing carbon emissions through financial instruments. Individual nations opposed implementation of any one solution, and as such, the report is structured as an analysis of the four solutions rather than a specific policy recommendation. The analysis in the report considers the implementation of the EU ETS, Direct Monetary Commitments, the Land Value Tax, and the Carbon Tax. Specific analysis of the above are summarized in figure 1 Certain members of the ECE expressed dissenting views regarding the analysis presented on the tax solutions. Their opinions are noted within the report.

On Urban Planning, the report explores the idea that Member States will be able to reduce greenhouse gas emissions through thoughtful zoning regulations, eco-friendly localization and transportation alternatives, and intelligent and constructive waste disposal. With different zoning regulations, such as construction of multi-nuclear megologpoli, Member States will be able to aggressively limit commuting distances. In an attempt to encourage controlled carbon emissions, the ECE recommended a de-emphasis on personal automobile usage and increased implementation of eco-friendly transit alternatives.

On Education, the overall goals are to inform the general populace of Europe on the current state of climate change and also adaptation and mitigation strategies. These are seen as necessary and applicable to the general populace of Europe because of recent rising sea levels, rising food prices, and the effects of natural disasters. The more specific goals of the education initiatives of this report revolve around, for one, mass education addressing the specific issues of human contribution to climate change itself, carbon footprints, the effect on climate change of greenhouse gases other than carbon, and global population and its effect upon climate change. Other indicators include the plethora of fiscal support for these goals. The report also draws attention to the research incentives offered to national governments, and the European wide goal of the European Climate Change Awareness Day. Additionally, the report mentions the gathering of the ECE Member States in a biannual summit for the purpose of addressing climate change mitigation goals.

The authors of the report have identified communication of best practices as an area ripe improvement. The report recommends that a best-practice database be implemented under the auspices of the ECE in order to foment efficient transfer of ideas and expertise regarding both innovative mitigation strategies, and methods of adapting to climate change.

Again, the ECE submitted this report as a series of informed analysis’s rather than absolute conclusions on the issue. The ECE has noted within the body of the report multiple objections regarding the potential economic impact of the programs explored,

and stresses that implementation of these solutions is pursuant to appropriate economic conditions in individual states.

Chapter I
Consideration of Sustainable Agriculture and Rural Development

A. Deliberations and Recommendations

I. Introduction

Climate change threatens the well-being of all nations, and has the potential to detrimentally affect the long term economic stability and quality of life in the Member States of the Economic Commission for Europe (ECE). In deliberations, the ECE has focused on environmental changes that will affect the European region. These include, but are not limited to: hot and cold weather spikes, an increase in natural disasters, melting of European glaciers, rising sea levels, and other geographically-centralized ecological threats. To address the looming threat of climate change, the ECE has devised a multifaceted plan to aid in the mitigation of and adaptation to a changing global environment. Facing these issues, the ECE has convened in order to collaborate on the formation of mitigation strategies to curb further damage to the environment, and adaptation strategies in order to cope with existing negative environmental impacts. The following report contains both recommendations and analysis of potential strategies which might be employed by its Member States to these ends. While these measures are targeted specifically towards the ECE region, the body also desires that they be adapted and applied to other regions of the planet.

The ECE has undertaken the process of crafting solutions thematically, as reflected in the following work. The component analysis and recommendations explore the themes of regulatory structures, urban planning, education, promoting innovation in emissions reduction and alternative energy sources, and adaptive measures to cope with climate change.

While the solutions within the report often transcend the regulatory powers of the United Nations, the ECE presents these solutions as viable mechanisms that may be implemented by Member States, regional and global bodies to mitigate climactic issues facing the European and global communities. The recommendations of ECE should be read as the conclusions of scholastic analysis undertaken by the ECE and not policy proclamations or compulsions to undertake particular mitigation or adoption strategies.

II. Economic Stability

The current structure of world energy production has been a vastly destabilizing impact on the world economies. In addressing any issue, climate change included, it is important to minimize economic turbulence. Only in situations of economic stability is there sufficient political will and sufficient means to address issues of climate change. As such, it is vital that any solution be evaluated on the basis of its forecasted economic perturbation. Time and time again, instability in major oil producing countries has lead to oil price inflation, which acts as a supply side shock to the economy, leading to inflation and low growth. The commission would remind Member States of the slow down in the 1970s, and the catalyzing impact of raising oil prices on the recent credit crisis. For

example, the United Kingdom has seen extreme weather conditions within its borders. This has been linked to global warming and has had an attached cost running into the billions in forgone business activity. To this end, the council believes that increasing incentives for a more diverse energy production industry will help to reduce volatility in energy prices, and hence improve economic stability.(1)

In pursuit of this, the council has considered a series of 'meta-incentive' plans, which help to internalize the negative externalities associated with high-carbon fuels. Hence providing greater incentive to the uptake of other fuel source, broadening the energy production sector and thus increasing price stability in the energy. Each of these incentive plans will also produce a revenue stream, potentially available to Member States to help meet other climate change related goals talked about within this report.

We seek to evaluate four potential programs:(2)

1. Cap and Trade
2. A Carbon Tax
3. Land Value Taxation
4. Direct Monetary Commitments.

We will measure each of these against four criteria:

1. Energy Price Stability: The potential impact of the measure on future energy prices and price volatility.
2. Incentive building: What incentives do the programs, and how would they lead to carbon emission reductions?
3. Distortive Effects: What negative impacts will each plan produce, and how will they distort markets, reduce efficiency of allocating resources and otherwise produce negative economic impacts. Also, how can thoughtful implementation address these concerns.
4. Feasibility and Globalization: How likely is it that each program will be adopted in regional blocks, and what effect on the outcomes will pertain should the measure be restricted to a minority of nations? In many mitigation practices, such as cap and trade, widespread adoption is crucial to efficacy.

The above criteria have been elected because they have sufficient predictive capability to assess each plan’s potential to affect mitigation of carbon emissions and to provide several dimensions that are important in the practical application of each policy.

Cap and Trade

The ECE's evaluation of the cap and trade method, is based upon the European Union's Emissions Trading System (EU ETS), relies upon data from the program already existent in European Union. In its current manifestation, the efficacy of the program is hindered for two reasons. Primarily, too many carbon credits exist, such that the emissions ceiling is non-binding. Additionally, the system provides inequitable rewards. States that have already shown technological ability and economic capacity to reduce emissions are rewarded, while no similar impetus exists for developing countries or those with a dearth

of energy technology. The problems observed above are not inherent components of a cap and trade scheme, but rather specific issues with the current incarnation. In order to manifest greater emissions reductions, thus efficacy as defined by the above criteria, the EU ETS would need to decrease emissions targets significantly and also to restrict the geographic boundaries of trade to avoid the phenomenon of pollution migration.

Evaluation*

1. Cap and trade is likely to increase energy price volatility due to its nature as a method to reduce consumption of energy resources that are traded as commodities. Cap and trade targets a given level of carbon reduction, but does not expressly consider the price of energy, this is set in the market for carbon credits. Hence, the change in energy prices is not externally determined, and is heavily dependent on the amount of credits issued compared to 'pollution demand'.
2. Cap and trade provides a strong profit motive to owners of carbon credits. The highest marginal benefit users of carbon will be submit the highest bids for credits, hence maximizing productivity of carbon used.
3. The cap and trade system sets finite limits on carbon emissions that decrease regularly over time. When limits are low enough, and when limits are binding, the cap and trade system sets a price through market mechanisms, and is therefore sustainable and least injurious to other economic activity. The limits are neither low enough, nor binding to a sufficient extent at this point. The ECE recommends re-examination of these limits and sees potential for stricter caps to be effective.
4. Cap and trade has low feasibility for voluntary enrollment, and, without comprehensive participation, effects a migration of dirty industry to avoid regulation. The above concern is manifest in every non-binding solution to climate change.

Carbon Tax

While the EU system has, over the last six years, been correlated though not necessarily linked causally to decreased carbon emissions in Europe, many members of the ECE believe that an alternative method needs to be made available for situations where cap and trade is not feasible. In both the aforementioned system and in the following proposal, the primary goal is to incentivize decreased carbon emissions by establishing a market value for carbon emissions. A large bloc in the ECE as an alternative to the EU ETS, that a system of carbon taxation within States be applied deliberately in order to offer a direct, tangible and easily quantifiable dis-incentive to emitting greenhouse gasses. Supporters of this proposal that, by providing a dis-incentive to carbon emission, states will foster a truly market-based solution in which the private sector is competing for the lowest emissions, and leading innovation in sequestration and mitigation methods with the same energy they apply to evading income taxes today.

Structure

* The States of Bulgaria, Italy, Israel, Russian Federation, and the United States of America feel that the proposed cap and trade system would create an increase in the cost of domestic production. These Member States are worried that this will cause greater importation of foreign goods and hurt a nation's economy, creating greater foreign debt. These States also believe that if a country feels the cap and trade system is unfair, they may not be able to sustain themselves, causing unemployment issues.

With regard for the diverse and intricate economic conditions that exist within the ECE and the world at large, the ECE does not intend to suggest a percent rate at which a carbon emissions tax would be assessed. Members of the ECE suggest the establishment a research body to determine the appropriate taxation rate. However, it is crucial that the tax be assessed as equally as possible in all states so as to avoid a gradient flow of corporations and innovation to less effective taxation structures. The ECE simply recommends that the tax be applied at a flat rate, such that a fair market value be established for carbon dioxide emissions. Such establishment would bolster the existing cap and trade system by providing a more stable market value. Additionally, the implementation of a flat tax would eventually manifest as progressive, because, quantitatively larger polluters are very often corporations with adequate resources to pay the tax.

Balancing the Tax Burden

In the current trade and development climate of Europe, and the world at large, the idea of increasing the aggregate tax burden is unpopular and frankly, economically injurious. As such, the idea of a carbon tax would best be assessed in exchange for a proportional percentage of property taxes such that the overall tax burden is constant. Of course, such a suggestion is not purported to be universally beneficial. As different situations present in different states, different governments may find it most beneficial to levy the tax as an additional revenue stream, or to use the carbon/income exchange to lower tax burden A suggestion is that the levy understanding that implementation methods will vary.

In the process of rebalancing the tax burden, the proposed tax reduction can be used as further incentives for environmental regulation compliance in industry and increased sustainability in building practices. Any tax reduction for corporations can be based around their efforts to restructure around a nation's environmental goals and standards. Any reduction in property taxes can be determined based on the sustainability of the land being levied. In these ways, the tax rebalancing will not only reduce the injurious economic impacts of the carbon tax but will further the environmental goals of the ECE.

Reinvestment

In the spirit of sustainability, the ECE strongly suggests that carbon tax revenue be re-invested in green growth, specifically, and most symbiotically, in carbon mitigation technology and innovation. The ECE implores states to re-invest the emissions levy in practical research applications that generate more cost efficient methods for decreasing carbon emissions. The ECE supports using revenue to fund increased cycling and pedestrian infrastructure, to increase fuel efficiency standards, provide alternatives to vehicle ownership such as car sharing, faster public transit, and overall regeneration of urban infrastructure to more sustainable plans detailed later in the report.

Evaluation*

*While understanding the need to reduce carbon emissions, the States of Bulgaria, Israel, Italy, Poland, Russian Federation, and the United States of America believes the ideas outlined in this section of the proposal are not in the best interests of all Member States. It is these States position that the ideas outlined in this section of the proposal are not politically feasible as it will create an additional tax for all Member States.

Israel, Italy, Russian Federation, United States of America, and other states present within this committee

1. As the carbon tax rate is directly targeted on a price increase for carbon, it follows that its effect is to induce a one-time fluctuation followed by a high degree of stability. Additionally, the artificial increase in carbon price can be easily removed to respond to emergent situations.
2. The carbon tax provides a clear dis-incentive to emission of carbon dioxide. However, given the elasticity of demand for emissions is indeterminate, the magnitude of the dis-incentive's effect is yet unknown. Clearly, there exists an informational problem in this method.
3. On one level, the carbon tax is a clear per-unit tax, which are know to have large distorted effects and large dead weight losses associated. However, where the carbon tax is pigouvian, designed to monetize negative externalities pursuant to the research of Arthur Pigou, it is likely to improve efficiency in line with Coases theorems. This largely rests on the extent to which carbon taxation reflects genuine costs of carbon, and hence has the potential for catastrophic failure if these costs prove difficult to accurately evaluate.
4. The carbon tax has poor prospects for globalization because of the political difficulty of its implementation owing to the fact that no country is a particular winner. However, it has high potential for efficacy once implemented, as national taxes are binding to a far greater extent than any international policy.

Land Value Taxation

Whereas the two previous solutions represent alternatives to one another, the Land Value Tax (LVT) is a novel solution that could work concurrently with either method. The LVT is levied against the underlying value of land independent of any anthropogenic development. The tax rate would be inversely correlated to energy efficiency compliance of developments on the land such that a highly energy efficient parcel of land pays a lower tax rate regardless of the market value of the developments on it. The benefits are that the LVT encourages cultivation of sites likely to have high land value in an energy efficient manner, and encourages the uptake of efficiency standards as a method of mitigating tax burden.

Evaluation*

1.In the first order, the existence of an LVT should not have an effect on the

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recognize the current economic situation throughout our world. These delegations are deeply concerned with the implications that their citizens will face.

We believe that the carbon tax clause will result in higher taxes for corporations that will lead to the inflation of products. Consequently, unemployment will rise and corporations will still maintain their levels of carbon dioxide emissions.

The United States of America recommends further research into this situation that would result in more efficient reduction of carbon emissions that can save our tomorrow.

* While recognizing the need for a reduction in greenhouse gas emissions, especially from the housing and business sectors of the economy, the States of Bulgaria, Israel, Italy, Russian Federation, and United States of America believe that this tax, while having the potential of promoting greenhouse gas emission mitigation, could possibly lead the deforestation and disincentive for smaller local businesses. The LVT as a flat tax rate will tax land that is being used for forestation. This will promote deforestation due to the lack of capital production from the land to off-set the tax. This tax also would cause a greater burden on smaller businesses while having a negligible cost to larger businesses. Some of this committee believe that this tax needs to be researched to a greater extent and requests the Housing and Land Management sub-committee to take upon this task.

energy market as it is tied to property value. However, in effective manifestation, it could generate predictable changes in the carbon market based on demand side stimulus.

2.The LVT highly incentivizes increased energy efficiency in a manner similar to the carbon tax. Additionally, it is likely to incentivize the use of infra-marginal land currently undeveloped. The LVT will not however, generate changes on the supply side of fossil fuels.

3.Land Value Tax is likely to be highly efficient. As it does not impose any cost directly on carbon, it will be unlikely to affect changes outside of its purview.

4.Land Value Taxation has positive prospects for global application, pursuant to ability to accurately evaluate land values in states with non-standard private property laws and strong traditions of inherited land. Uniquely, the Land Value Taxation is not fatally injured by low participation.

Direct Monetary Commitments

The proposed method of direct monetary commitments would be calculated as a ratio of carbon emissions to economic activity. Monetary Commitments would go to a general sustainability fund, tasked with reinvestment in green development projects, administered through regional intergovernmental organizations, like the ECE . Ideally, this method would provide a negative incentive to emitting carbon, and couple the incentive with capital in order to promote green growth prospects.

Evaluation**

1. Given the difficulty of evaluating the variables in multiple fiscal systems at once, it is difficult to predict the potential of the program to disturb price stability. Also, given that the assessed rate of commitment is likely to change, the it is likely that energy and carbon markets become accordingly volatile.

2. The process would build strong incentives on a national level, but offers no recourse for addressing the problems the monetary commitments are penalizing. Facilitation therein relies completely on external policy recommendations. Additionally, no individual firm or contributor to pollution is directly induced to lower emissions in this model. The monetary commitments rely on national governments to exact necessary pressures. This has not been effective in the past.

3. The major efficiency concern posed by the monetary commitments program comes from an endemic lack of control. Primarily, no regulatory control or enforcement is outlined in the proposed monetary commitments. Additionally, no mechanism for determining the monetary commitments is enumerated. As such, the concurrent changes of GDP and carbon output could result in the spurning of investment opportunities that raise growth more than they reduce carbon.

4. This mechanism has already been attempted in the EU Green Growth Fund wherein States are asked to contribute to a fund similar to that proposed above to limited results. The idea of a commitment assessed against carbon emissions has

** Israel, Italy, Russian Federation, and United States of America believe that a direct monetary commitment will be unable to compel the inclusion of States with larger economic activity due to the lack of incentives. While States with smaller economic activity have much more to gain. We also believe that this also will either infringe upon Member States' sovereignty or will lead to lack of participation.

limited compulsory power and cannot be expected to generate strong commitments from the largest carbon emitters.

Pursuant to the evaluations above, the committee proposes that each nation elect one of the above forms to fit their regulatory and economic landscapes. No proposal works particularly against any other, thus it falls to States to choose the most efficient and least cumbersome in regards to their circumstances. The committee notes that, with the exception of the Land Value Tax scheme, each method is exponentially more effective as participation increases.

317 Figure 1

	Price & Economic Stability	**Incentive Building**	**Distortive Effects**	**Feasibility**
Cap and Trade	**Low**: Likely to exaggerate price fluctuations	**High**: A hard cap on emission guarantees reductions in its jurisdiction to meet required levels	**Low**: Market based program unlikely to create significant dead-weight loss	**Low**: Requires regional, if not global implementation. Previous efforts have been of mixed success.
Carbon Tax (pigouvian taxation)	**High:** Will lead to a one-time price change for carbon, but likely to help stabilize prices thereafter.	**Moderate:** Strong & clear incentives to reduce emissions. However, level of reduction will depend upon market forces.	**Moderate:** While the potential for increased efficiency exists, uncertainty about price & demand interactions may lead to significant dead-weight loss	**Moderate**: Implementable locally, though regional/global uptake is likely to be more effective.
Carbon Mitigated LVT	**High:** Likely to help smooth carbon consumption and reduce volatility.	**High:** Likely to substantially improve incentives to reduce domestic and industrial emissions.	**Low:** Market based scheme which may correct existing distortions.	**High:** Local adoption likely to be successful with no need for global uptake.
Monetary Commitments	**Low:** Variability in the size of the contribution as growth follows its natural path is likely to increase volatility in energy prices.	**Low:** Not clear, the charges can be avoided by action. No incentives generated in the private sector.	**High:** Issues with incentives may damage investment if GDP growth outpaces emission reductions.	**Low:** Difficult to implement and unenforceable.

318

III. Urban Planning

Among the core sources of climate change identified by the scientific community is the emissions of Greenhouse Gases (GHGs) resulting in exacerbation of the greenhouse effect is personal transportation fuel usage. In the past half century, the incidence of personal vehicle ownership in myriad countries has increased such that their emissions comprise a majority source of GHGs. Use of these personal vehicles in long daily commutes from residentially zoned areas to central business districts and distant manufacturing zones is of primary concern in regulating carbon emissions. The simple solution is to reduce commute distances, and the methods of doing so are complicated.

The goal of restructuring urban planning is a zoning model that departs drastically from the traditional, for example the Von Theunen[1] model of urban planning. The new paradigm to decrease carbon emissions should focus on scaling-down the existing model and creating multi-nuclear megologpoli[2] through aggressive re-zoning. A compromise goal would be to alter commuting methods in combination with diminished zoning changes and monetary impeta for commercial development outside the Central Business District (CBD).

Zoning

Many members of the ECE recommend that zoning codes in both developed and developing urban areas be redesigned such that satellite business districts and residential areas are zoned to half commuting distances from modern averages in North American and European urban areas. The effect of this policy would occur slowly as corporations and individuals seek to redevelop their properties, at which point they would be incited and monetarily encouraged to comply with new zoning regulations and contribute to the formation of a satellite business district. Additionally, the ECE suggests tax credits to encourage a corporation's employees to move to the new satellites and decrease their commute distances.

Localization and Transportation

The ECE would also like to propose several other mitigation strategies focused on localization and transportation. Suggested strategies; when necessary, applicable, and not already in place involve alteration of current transportation systems, improvements of the currently available infrastructure through addition of eco-friendly energy renewable architectural designs, as well as more local eco-friendly initiatives, for example the meat free day in Ghent, Belgium[3], which all seek to reduce greenhouse gas emissions.

1 The Von Theunen model was the first to describe urban areas of concentric rings of decreasing density with a centrally located business district.

2 Urban areas that depart from the traditional; see Von Theunen models

3 Meat processing plants produce a large percentage of GHGs and promoting awareness could aid efforts toward the reduction of these emissions.

The current condition of public transportation is inadequate.* It is insufficiently promoted, and people are not sufficiently presented with incentives to use it because it is not adequately cared for - trains, buses and subway stations are often dirty and overcrowded. Public transportation is a viable opportunity for a governmental body to control carbon emissions created by transit in cities. With increased usage of public transit, governments abilities to control carbon emissions increases through regulation on what standards public transportation meets. It is suggested that governments should pay more attention to the maintenance of the preexisting transport infrastructure, as well as invest in the purchases of new trains in order to increase the number of people willing to choose public transportation over their own cars. When introducing the new buses and trains, however, the government should also pay attention, when possible to acquiring green or eco-friendly vehicles (such as hybrid or electric vehicles) in order to further enhance the protection of the environment. We understand that the integration of hybrid bus fleets or electric railing can be extremely expense, but the ECE recognizes that these topics should be introduced as long-term goals for individual countries as they are an effective mitigation strategy when dealing with the negative impact of GHGs.

Member States have expressed an interest in providing incentives for public transportation in order to allow governmental bodies to have more control over the public's level of pollution through transportation. With the aforementioned integrated systems, green public transportation will be emphasized. However, this body urges individual governments to further use incentives for green public transportation in order to aid the creation of low-emission cities. Other possible incentives for public transportation include taxes on automobiles running inside the city, increased no-drive zones, and reduced-rates for certain citizens or for certain non-peak times. Another way of encouraging citizens to use public transportation can be the reduction of bus and train ticket prices, or at least price discrimination by bundling - providing ticket discounts for certain groups of citizens, such as students or the elderly. The main goal of these incentives is the de-emphasis of urban automobile usage and present accessible, green public transportation.

Countries are encouraged to implement the policy of reducing the traffic in major city centers - for instance, the government can choose to impose tolls on cars which intend to enter the center. This kind of policy would reduce the carbon emissions and would contribute to a cleaner air, as well as start the gradual reduction of people's reliance on personal transportation by encouraging them to use public forms of transport.

Further, governments could impose a fee for fuel-inefficient cars. Fuel-inefficient car users would pay higher tolls than their fuel-efficient counterparts. This kind of policy has already successfully been implemented in Germany[4] and has significantly contributed to a decrease in carbon emissions, as well as to the phasing out of fuel inefficient cars.

The ECE wants to emphasize the benefits of integrative bicycle sharing systems in urban

* Estonia notes that those countries which have the highest transport related emission levels and the most dilapidated public transport networks are also amongst the least able to undertake expensive renovation of their networks. As such, dividing ECE funding towards public transport in these countries should be a clear priority.

4 Specifically Germany's successful bicycle-sharing programs.

environments. This clean alternative to other means of transportation allows for a decrease in the demand for vehicles and other systems that negatively impact the environment. This committee hopes to reflect successful bicycle systems like that of Copenhagen in an effort to promote energy-efficient transportation. With an increase of bicycle stations and the ability to rent and obtain cheap bicycles, public focus will turn from more polluting alternatives in urban settings.

As far as local eco-friendly initiatives are concerned, there is much more freedom in creating and implementing these actions, since they are largely location specific. We should seek to encourage fellow states to establish a more eco-friendly environmental system. These 'green days' need to be advertised more, and their importance emphasized, since even small changes represent an important step toward a 'greener' future. Some suggestions for better promotion include having government officials and prominent figures in societies set examples for others by first engaging in these eco-friendly activities. Further, making these days more realistic in terms of implementation is another important consideration that should be kept in mind during their creation. For example, a whole day without electricity or driving is an improbable scenario, because not many people are able to participate. Thus, rather realistic scenarios should be created from the onset, such as designating an electricity-free hour every few months. These types of initiatives would be easier to follow and thus would more likely produce positive results. Over time, small results culminate into the substantial reduction of greenhouse gas emissions.

The Commission has taken note on many strategies to reduce the carbon emissions in urban areas, especially through public transportation, and more specifically, through the reduction of personal automobile use. The differences between the reduction of personal automobile use and a no car zone are expressed through the broader scope that a reduction in car usage calls for in cities. No car zones provide limited areas in cities that personal automobiles are not allowed to enter, while this general reduction of personal automobile use calls for an emphasis on public transportation and a decrease in car traffic in cities. One strategy to achieve this goal is through the implementation of no-car zones in particular areas.

The ECE applauds the implementation of no car zones in central business districts as a valuable effort to reduce carbon emissions and suggests their continued implementation in urban centers. The no car zone has the net effect of decreasing the efficiency of private transportation (ability to drive stops up to a mile away from the destination), and increasing the relative feasibility of public transportation methods that are allowed to run through the no-car zone. Further enhancements to the no car zone include bicycle-sharing programs, such as the program prevalent in Spain and growing in the United States[5] programs provide important end point functionality to public transportation schemes, further reducing travel times.

No-car zones are common in some larger cities, and are especially effective in areas of dense population and near public gathering spaces, where air quality is most important.

5 The ECE applauds the implementation of no car zones in Copenhagen, Denmark; Paris, France; Montreal, Canada; Barcelona, Spain; and Washington and Denver in the United States of America

Air quality, particularly in cities, is an area of health concern, as the numbers of affected individuals increases greatly moving from a rural to an urban area.

Not only does the reduction of carbon emission and pollution through a no drive zone and reduction of personal car usage benefit all people, it doubles as an additional safety measure for pedestrians and cyclists. Having fewer cars on the roads would obviously reduce the amount of automobile accidents as well. The removal of cars from urban areas can increase the amount of public transportation used, adding buses or bicycles as needed. In itself, the popularization of public transport will reduce the need, and therefore use, of automobiles.
On an economic note, the reduction of automotive traffic will reduce the need, and therefore the cost, to maintain roads. With the use of greener public transportation, the depletion of the quality of roads and sidewalks will be greatly reduced, as high traffic areas will receive substantially less traffic than before, and areas of little traffic will be much safer, and with little to no need of maintenance.

The main goal of the implementation of these transportation strategies will be the prevention of more climate change in the future. The use of green public transportation can reduce the number of automobiles, the amount of air pollution and carbon emissions, and will promote the general health and safety of the public.

Waste Disposal

The ECE recognizes that the basic infrastructure of waste disposal is not yet universal throughout the European community. Further, we recognize that decreasing waste and improving recycling methods is an issue with great external repercussions and is a key component to developing sustainable economies in the 21st century. Improved waste removal methods reduce the pollutants created by waste materials. To that end, the ECE recognizes the need for international cooperation to improve waste disposal infrastructure in developing countries within Europe. In this sphere, the ECE believes that there is a good opportunity for direct foreign investment practices, owing to the fact that recycling is traditionally a profitable prospect once raw materials are refined and re-sold. At such a point, the burden rests on individual governments to insure that investment contracts are appropriately respectful of developing economies.

IV. Education

In recognition of the fact that both rising sea levels and increased food commodity prices will inevitably intensify global competition and threaten world security, the Economic Council of Europe (ECE) supports the education of the mass populous on the dangers of global climate change. Fundamentally, changing the lifestyles of people around the world is an essential element of mitigating climate change. The ECE strongly recommends that each polity educate its populous on the inherent dangers of climate change as it relates to rising sea levels which are currently growing by 22,033, 359.7 US gallons per year. Rising sea levels threaten coastal development that could potentially lead to mass migration and global instability. In addition the ECE recommends education on declining crop yields that raise global food prices and exacerbate world hunger. In order to motivate them to do so, they must know why adaption and mitigation of climate change is in their

personal self-interest; therefore, it is imperative that they are cognizant of the aforementioned risks associated with further climate change.

Education plays a key role in adaptation strategies. As climate change increases, so too does the frequency and magnitude of natural disasters. It is necessary that the general public is educated about protocol on how to react to the environmental disasters that have the potential to affect their region. This education can be disseminated for example, through schooling, advertising, and public service announcements among other methods. The knowledge of how to react in the face of natural disasters must be second nature in order to decrease chaos in these situations and increase public safety.

The body acknowledges that inter-governmental education has the potential to play a key role in dealing with disasters when they occur. Countries that have been subject to natural disasters in the past have already developed methods of dealing with these crises. These experienced nations should share their expertise in whatever disasters they have dealt with historically. Many countries are facing the possibility of certain types of disasters that they have never seen before, and would greatly benefit from suggestions on how to deal with these issues.

The ECE recommends the education of constituents at large for the purpose of making known the detrimental causes and effects of human induced climate change specifically with the goals of addressing problems and then future solutions. The problems include acknowledgment of human contribution to climate change, recognizing the pressing, unceasing nature of climate change, addressing individual, communal, nation-specific, and global carbon footprints, calls awareness to additional green house gasses and their effect on climate change, and draws attention to the global population and its connection to climate change. The future solutions include noting the availability of additional sources of energy and alternative forms of transportation.

Further, the ECE deems it crucial that Non-Governmental Organizations (NGOs) participate in this European climate change initiative, including but not limited to the European Commission for Media, the Baltic Environmental Forum, the Climate Action Network Europe, the Coalition Clean Baltic, the CEEWeb for Biodiversity, the European Environmental Bureau, the European Forum on Nature Conservation and Pastoralism, the European Water Partnership, the Forests and the European Union Resource Network, the Friends of the Earth Europe, the International Friends of Nature, the European Network of Environmental Law Organizations, the European Federation for Transport and Environment, the European Policy Office within the World Wildlife Federation.

The ECE calls upon establishment of a European Climate Change Awareness day specifically for the purpose of educating the public and beginning outreach initiatives. This awareness day allows for public outreach in relation to climate change, in educating the public in mitigation and adaptation strategies. The ECE also requests a Europe wide collection of data on current public awareness of climate change on a national level. The collection of this data would allow further efficiency of implementing the European Climate Change Awareness day. By demonstrating an understanding of awareness levels this day is not only a celebration of progression, but also a confrontation of the real levels

of mitigation and adaption strategies across Europe. Furthermore, the ECE encourages the allocation of monetary incentives to governments to establish educational programs focused solely upon confronting the issue human induced climate change.* **

The ECE is discussing the need to address global climate change by insisting that all member nations consider the research and development of environmentally friendly technology. In discussing this with committee members, the need for individual government research and development became evident. When nations develop their own technology through state-sponsored research, they becomes self-sufficient through the use of this developed technology. Also, the nation can export this technology to repay the investment made by the state and to ensure continual revenue generated by the production of this environmentally friendly technology.

Government investment in environmentally friendly technology has proved to be beneficial to the nation's well-being, as shown in the cases of Denmark and Iceland. The national government of Denmark in 1970 started the production of wind turbines. The Danish government made the production of environmental friendly technology a state project. Designation of portions of the national G.D.P. over the decades has propelled Denmark into the leading position in the production of environmentally friendly technology. Also, Iceland began to invest in hydrothermal energy in 1965 and was the world leader in this field by 1969.The Icelander government in this technology has ensured Iceland’s reduction in foreign fuel dependency and enabled the government to earn revenue through this invested technology. These examples are beneficial to the individual investment in environmentally friendly technology by governments. These will help to lessen the advancement and effect of climate change by giving incentives for national governments to procure technology to create a healthier planet by investing in research and development.

There is hope of the ECE that in the future there be intensive research into technological advancement in climate change mitigation. Furthermore, the ECE hopes to develop research into renewable energy in the sectors of water recycling, solar power, bio fuels, and recycling of waste materials. The committee encourages ECE member states to promote communal understanding and sharing of climate change mitigation technology, and sharing this knowledge with developing countries. Additionally, the ECE encourages member nations to take part in combating climate change, specifically in industries that are playing a negative role in environmental degradation.

In recognizing the benefits of periodic conferences in the sharing of strategies, quantifying progress, and having the necessary purview and scope to be able to deal with more local issues, the Economic Council on Europe encourages the creation of a Biannual Conference for aforementioned purposes. With the local attention, there would be more

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* While Hungary does understand the importance of climate change awareness, and wishes to express it does not dissent to the institution of European Climate Change Awareness Day, Hungary feels that the agenda which is to be set under Climate Change Awareness Day can be included on the international agenda of Earth Day. Hungary believes this should only be done if there are many agenda aspects that are redundant or can be included under Earth Day.

** Greece, while supporting the ideals of a Climate Change Awareness Day, are currently unable to commit to this celebration.

concentrated effort on the European scale. At present, the CSD is the only committee that focuses on specifically climate change, but only as one topic. This summit would be a gathering of not only member states of the ECE, but the regions of those in the ECE that could focus on local specific projects. Additionally this differs from other collections of the ECE because it would set a specific agenda for addressing climate change. These conferences will not only be an opportunity for the previously stated purposes but will also serve to encourage nations to strive and meet set goals.

We need to emphasize the necessity of a biannual gathering of ECE members in order to specifically combat the issue of human induced climate change. This summit will set a specific agenda that will limit and focus the topics discussed. Additionally, the biannual gathering would receive speeches by experts on the discussed topics, specifically as they relate to carbon emissions and other green house gasses as in the United Nations Framework Convention on Climate Change or the results of the United Nations Conference on Environment and Development. The summit also invites European corporations to participate and present both shortcomings and successes in dealing with reducing GHG's. This meeting would directly deal with the issue of climate change as opposed to the plethora of other issues the ECE deals with. European countries could utilize this gathering for the interest of requesting international help, both intellectually and financially. The organization of this biannual meeting would call upon one rotating representative from each of the regions of Europe to present upon obstacles and developments within that region that can be applicable and helpful to the committee as a whole. This would encourage discussion and interaction between the European states. This gathering aims to encourage unity and collective action within the European community. This acts as a local to regionally international to global connection in order to effectively approach and combat climate change.

Mitigation Practices: Information Sharing and Promoting Innovation

Representatives have expressed desire for the formation of an international networking system, designed to share successful methods of implementing adaptation and mitigation strategies. Additionally, the proposed database will promote the sharing of resources (such as construction consultants, civil engineers, city planners, etc.) The body recognizes that different nations have specializations in certain areas, and believes that it would be very beneficial to the international community to have a platform for sharing this expertise.

The body suggests that the database be located online and consist mainly of a catalog of contacts who specialize in certain areas having to do with sustainable development or issues concerning climate change. The database should be divided into two main categories:

1) Contact information for experts on natural disaster damage control including the preparation of communities for expected climatic events,
2) Contact information from companies, governments, and individuals who have successfully implemented sustainable practices on either a local, national or international level.

This database shall be administered under the Sustainable Housing sub-committee of the ECE and is intended to be a centralized collection of resources that will prevent useless reinvention of the same ideas and will promote sharing of information and collaboration, as managed by the Sustainable Housing sub-committee between nations and other concerned parties.

Renewable Resources

The ECE is concerned by the inability of developing countries to commit to carbon reduction, many of whom have energy portfolios consisting of primarily coal and oil consumption, as well as their inability to procure a viable and sustainable means of implementing climate change policies in accordance with proposals made in the United Nations Framework for a Convention on Climate Change (UNFCCC), it is the recommendation of many members of this body to take substantial and effective action in implementing a green technology export regime. This proposal derives from the fact that the most feasible method for developing clean energy programs will require the importation of green technology from countries who have drastically infused clean energy into their energy portfolios. Therefore, the most viable means of accelerating this process is to formally establish a green technology export regime program, the purpose of which will be to facilitate the distribution of green technology so as to expand the scope of global green technology usage in order to ensure meeting both adaptation and mitigation goals.

Adaptation

The body would like to stress that the more intense environmental fluctuations caused by climate change necessitate adaptive transitions such as retrofitting buildings with both heating and cooling systems to prepare for more drastic temperature shifts and raising bridges in anticipation of rising ocean levels.

Adaptation strategies also include preparing for increased frequency and severity of natural disasters including but not limited to hurricanes, blizzards, floods, drought, tornadoes, tsunamis, etc. Of these, drought is perhaps the most worrisome in the ECE region as it threatens food production and public access to potable water. Many of the previously listed disasters pose as much of if not greater threat to potable water. As such, the body encourages the agricultural sector to convert to sustainable irrigation practices that maximize available water. Preparation for drought may also include the development of more extensive water transportation systems that, while being expensive, are crucial to surviving impending natural disasters. These also have the benefit that they increase immediate access to potable water regardless of the threat of drought.

The ECE would like to remind its member bodies of the importance of thinking critically about how climate change may possibly affect their countries, and preemptively developing their own adaptation measures in order to minimize possible negative consequences.

Conclusion

In order to achieve global sustainability, the ECE calls upon countries to work collectively and to actively bring forth new ideas that will change science itself. Countries need to support scientific and technological advancements in support of filling human needs, while at the same time maintaining a friendly environment and moving toward sustainability of human consumption patterns. By doing so, it will help us go beyond what we already know and expand the world's capacity system for discovering new things. We also need to adhere to the mechanisms set by the United Nations to achieve all aspects of global climate change and make it their own.

Chapter II.
Adoption of the report of the Economic Commission of Europe

At its meeting on 22 November 2011, the draft report of the Commission was made available for consideration. The Commission considered passed the report.