

COMHAR'S RESPONSE TO THE MINISTER FOR
THE ENVIRONMENT & LOCAL GOVERNMENT ON
THE DRAFT NATIONAL GREENHOUSE GAS
ABATEMENT STRATEGY

Introduction

Comhar welcomes the opportunity to contribute to the development of the National Greenhouse Gas Abatement Strategy, which will be a central part of national policy in the coming years. The challenge of climate change requires immediate and serious attention. We welcome the commitment to adopt a broad national strategy to reduce greenhouse gas emissions.

1. The overall thrust of the Strategy

- 1.1 The potential impacts of climate change need to be clearly outlined in the Strategy. This is essential to persuade both the general public and policy makers of the seriousness of the problem, and of the critical need for action. There is already a high degree of consensus in the scientific community about the significant and dramatic implications of climate change. These implications, together with Ireland's international commitments, underpin the Strategy, and must be strongly presented from the outset. If the Strategy is to be successfully implemented, appropriate administrative structures must be in place. These structures may either take the form of refocused existing structures, and/or new structures. The establishment of such structures will help to convince the general public that these issues are taken seriously by government.
- 1.2 *Comhar* endorses the need for early action by all the economic sectors and at all levels of society. While the full implementation of the Strategy will be the work of

some years, it is important that initial action is not delayed. It is important to get early agreement on the Strategy, and also that future policies, including budgetary policy, introduce measures to implement it. Measurable progress must be identified by 2005. Delay would require more painful action at a later date. This point cannot be understated, particularly in the light of the more rigorous targets expected in the post-2012 period. Due to the time lag before greenhouse gas emissions can be sufficiently reduced to reverse current trends in climate change, it may be difficult for the public to appreciate the impact of the Strategy. However, this time lag makes it all the more important to begin the process of implementation as soon as possible. The message must clearly be given that this Strategy represents a necessary, radical departure from “business as usual”. With the right mix of policies and measures, Ireland, as an economy and as a society, can achieve a fundamental, long-term change in behaviour.

- 1.3 We have concerns, however, about whether the draft Strategy will be seen as credible without a clearer view of the steps needed to achieve Ireland’s target. It is important not to minimise the level of effort involved. To be accepted and workable, the Strategy must contain the right balance of ambition and credibility. Underselling the effort required might undermine the message of how critical the situation is.
- 1.4 There are likely to be implications for economic development arising from the Strategy. In this regard, it is important that policy options seek to ensure that compensatory opportunities will arise.
- 1.5 Ireland has been given an apparently favourable target (within EU burden sharing) under the Kyoto Protocol, and there will be little sympathy from other States if we fail to achieve it, given our current booming economy. However, the reality is that the target of restricting growth in emissions to 13% over 1990 levels presents a significant challenge, representing an actual reduction of as much as 25% compared to “business as usual” projections. Currently Ireland is one of the most fossil fuel intensive economies in the world. This comes about because Ireland has exploited all large-scale hydro opportunities for power generation and has, rightly in *Comhar*’s view, decided against developing nuclear power. The impact of reducing this

dependency on fossil fuels may affect costs in such a manner, vis-à-vis our trading partners, that our relative competitive position will be worsened, with adverse impacts on growth, employment and wealth, but with compensating benefits for society as a whole in respect of quality of life. However, Ireland is not unique in terms of its obligations under Kyoto, and thus some threats to competitiveness might be overstated.

- 1.6 The stress in the draft Strategy on broadly based measures and on equitable burden sharing is a positive feature and is to be commended. However, while the Strategy seeks to distribute the burden of achieving Ireland's abatement target equitably across economic sectors, it provides no explanation of the methodology used to determine this. The Strategy should include a brief explanation of this methodology. The wide range of relevant issues identified in the draft Strategy highlights the extent of action needed across the board. Given that greenhouse gases are emitted across the range of economic sectors, as well as resulting from individual consumer/household behaviour, a broad range of policies and measures is required. However, we believe that much more must be done to raise awareness in the sectors and among the general public as to what is necessary, and to encourage, support and, where required, enforce action.
- 1.7 It is not clear from the Strategy that Ireland will be successful in achieving the necessary reductions by 2012. There is not sufficient information in the document to provide confidence that sufficient savings can be made even if all of the individual measures and strategies are successful in achieving their targets. An appropriate set of indicators, to be regularly monitored and reviewed, is required (see our comments on implementation).
- 1.8 The draft Strategy can be criticised for a certain lack of imagination in relation to possible mitigation measures. By not including more imaginative measures, it may make the job of achieving targets all the more difficult. More innovative approaches might be suggested, leading to longer-term changes which might position the Strategy within a wider process of moving towards sustainability. These might include, for example,

- community and neighbourhood co-operation in energy use and purchasing,
- encouragement of hiring over purchasing,
- high standards of energy insulation in existing and new housing and other buildings,
- industrial ecology,
- enhanced environmental management, and
- encouragement of novel environmental technology through fiscal and other methods.

The Strategy should also highlight the reality that some changes of lifestyle on a national basis are required to achieve its goals.

- 1.9 Particular attention must be paid to ensuring that the Strategy's message is clearly understood by all those who will be called on to take action, especially the general public. Clear and unambiguous signals must be given about the urgency of the situation and the need for change. (We will return to this point later in regard to communicating the Strategy.)

2. The guiding principles underlying the Strategy

- 2.1 It is important that the Guiding Principles are clearly stated and reflected throughout the Strategy. In this regard, the draft is somewhat confusing in its presentation of the underlying principles on which action must be based. For example, "Costs and Benefits of Strategy" and "Maximising No-Regret Measures" do not seem to us to be key underlying principles, but are more in the nature of implementing considerations. This confusion needs to be addressed when finalising the Strategy.

- 2.2 *Comhar* proposes that the guiding principles include:

- acknowledgement of the global context – social justice, equity, sustainable development;
- sustainable development (however, the interpretation should be broadened to include the social dimension);

- decoupling economic growth from energy consumption and other emission sources;
- integration of environmental considerations with economic policy;
- shift from economic growth to sustainable economic development;
- ensuring that future generations are not burdened with either the costs or the impacts of dangerous climate change; and
- public participation (as in the Aarhus Convention), embracing tools and strategies to inform the public and to give them opportunities to be involved. This principle must be integrated throughout the Strategy and its implementation, and must also extend to other policy areas and relevant negotiating structures and processes.

These points should be read in addition to the principles already contained in the draft Strategy (promotion of sustainable development, meeting long-term and future commitments, protection of economic development and competitiveness, maximising economic efficiency and sectoral equity).

- 2.3 Issues of social equity must be addressed, in particular where proposed measures will affect those who are already marginalised in society. Therefore, the Strategy will have to be “poverty/equality proofed” by Government to ensure that it does not add to poverty or social exclusion. These issues need to be addressed in the context of established national policy as set out in the National Anti-Poverty Strategy, and, where appropriate, the area-based Partnership Companies’ approach to local development.

3. Balance between sectoral policies/measures and cross-sectoral instruments

- 3.1 Economic instruments must ensure that decision-makers are guided towards reducing environmental impacts rather than opting for higher production costs (which might seem the easier option in the short-term). Past experience would suggest that some economic actors are not sufficiently aware of the benefits of environment-friendly

changes to take action without some form of incentive or compulsion. Examples could be given of pollution problems which were only tackled on foot of regulation/penalties, even though some changes are cost beneficial to the industries concerned. The need for education, and for significant incentives and/or disincentives, to ensure change in the longer term, should not be underestimated.

- 3.2 Properly designed cross-sectoral instruments, including some combination of greenhouse gas taxation and emissions trading, can have the potential to achieve equity within and between sectors on a least-cost basis. However the full implications, both economic and social, need to be examined in detail as proposals develop.
- 3.3 Maximising the equity outcome and ensuring the most beneficial balance between costs and benefits of some economic instruments need to be carefully considered in the Irish context. For example, increasing a tax or charge (other than at penal rates) on a particular activity will have marginal influence unless alternative options are available. The proposed increase in transport fuel taxes is an example, particularly in rural areas. This need for alternatives to encourage changed behaviours applies in many of the other areas for which economic instruments may be suggested.
- 3.4 Equity considerations must also be applied to the balanced use of these instruments across the sectors. We are concerned that tax exemptions should not be used in a manner which would either affect the overall benefit or place an unfair burden on other sectors.
- 3.5 We note the ongoing development of taxation measures in other countries, and expect this will continue as their strategies for reaching their Kyoto targets are put in place. This development will afford opportunities to intensify the use of this option in Ireland in a manner compatible with the maintenance of competitiveness.
- 3.6 With regard to emissions trading, we recognise that work is still being carried out under Kyoto to develop appropriate systems. We also note that an Emissions Trading

Advisory Group has submitted an interim report to the Minister for the Environment and Local Government and will present a final report in the coming months. Developments in the area of emissions trading will need to be reflected in the final Strategy, which should, in the interests of public information and debate, elaborate on the issues involved.

3.7 However, we feel it is important to note that some groups have concerns about the appropriate and equitable use of emissions trading, either as a global or a domestic instrument. We therefore recommend that consideration of this potentially useful instrument needs to take account of such issues as:

- the question of whether emissions trading confers a *de facto* “right to pollute” on countries/industries with historically high emissions;
- equity in setting up a system of emissions trading;
- the method of allocation of permits;
- ensuring that reductions are actually achieved;
- monitoring and review; and
- penalties for non-compliance.

We would also emphasise the need for clear advance signals on the use of this instrument, which can be taken into account in investment cycle decisions.

4. Linkages to public policy in other areas

4.1 The Strategy needs to be fully integrated with, and supported by, all areas of public policy in order to ensure that it is effectively implemented. This includes the National Development Plan; spatial strategy and regional development; agriculture; industry; energy; housing; conservation of the natural environment; habitat protection; forestry strategy; and the overall tax regime. *Comhar* is concerned that this process of integration is not completely carried through in the draft. Furthermore, it is essential that such integration be fully realised in policy and decision-making and implementation, if the Strategy objectives are to be achieved.

4.2 The recently published National Development Plan, as the major investment programme for the period to 2006 and which also lays the groundwork for subsequent years, will be crucial to the achievement of targets in many areas. However, the measures necessary to meet Ireland's commitments under Kyoto have not been fully taken on board in the Plan. Also, the Plan does not address issues in respect of which adaptation to the consequences of climate change may be necessary over time, e.g. flooding, coastal erosion and loss of habitat. It is essential that the Operational Programmes, which will deliver on the Plan's proposals, ensure that the implementation phase is in accordance with a sustainable development path. The Strategy should make specific recommendations in respect of the measures proposed as part of the Plan and Operational Programmes to ensure that targets are met and to mitigate or prevent, as appropriate, predicted potential negative impacts of climate change.

4.3 The National Development Plan should give support for the development and adoption of new mechanisms to address emission reductions. For example,

- there is potential to support a shift to more sustainable building systems within the housing programme;
- the existing mix of investment in roads and public transport requires ongoing monitoring to ensure that the correct sustainable balance is achieved, taking account of the projected increase in traffic-related greenhouse gas emissions;
- there should be additional investment in development of new technologies which may result in the introduction of new and non-polluting fuels such as hydrogen, and greater use of electricity-powered transportation.

4.4 *Comhar* recognises the important role of spatial planning policy in achieving, for example, more sustainable patterns of settlement and transport infrastructure, which are important areas in this Strategy. We recommend that the Department of the Environment and Local Government, in the development of a National Spatial Strategy, should take into account the targets to address emissions reduction.

- 4.5 In addition to ensuring the integration of future policies, current policy and actions must not hinder the early implementation of appropriate abatement measures under the Strategy. Given the extent of the problem, and the level of effort which will be required to address it, it is imperative that actions which would have the effect of worsening the current situation be avoided. National policies will need to be examined in this regard.
- 4.6 For example, difficult decisions may need to be taken in respect of certain industrial developments, such as an increase in the level of cement production, as highlighted in the Greenhouse Gas Abatement Strategy. Plans for expansion of this industry will add significantly to CO₂ emissions, with implications for equity arising in other sectors. We recommend that the Strategy should address this in more detail and that additional measures, such as funding for R&D to develop alternatives, should be provided.
- 4.7 We are concerned that substantial capital investments are currently being undertaken in greenhouse gas-intensive development. Such investments will
- make achieving the targets considerably more difficult, and
 - result in unnecessary societal economic costs where economic instruments are introduced to bring about greenhouse gas reductions.
- 4.8 For this reason there is an urgent need to make immediate policy changes. These include
- ensuring that electricity liberalisation maximises the potential for efficiency gains and renewable energy, and
 - halting the process of urban sprawl and car-based land use patterns.
- 4.9 Renewable energy generation should be a central component of the Strategy. However, the expansion of renewable energy is often delayed/thwarted at present by, amongst other things, planning difficulties, particularly in relation to wind farms. These barriers must be overcome in order not to jeopardise the Strategy. More

emphasis should be placed on support of appropriate and small-scale and well-sited wind-energy and biomass projects, which can be locally beneficial.

- 4.10 It is crucial that measures taken to counterbalance emissions should not result in other environmental pressures. There is a risk of this occurring in respect of forestry (see below); it could also arise in respect of measures proposed to counteract the socio-economic effects of the closure of peat-fired stations in the Midlands. Peat is a very carbon intensive source of energy, and so every effort needs to be made to eliminate Ireland's reliance on it, and a balanced and integrated view of alternative options needs to be taken.
- 4.11 It is not clear that the application of Best Available Technology (BAT) under the EU Integrated Pollution Prevention and Control (IPPC) Directive will ensure that all appropriate preventive measures are fully taken. We recommend that this should be addressed in the amending legislation currently being prepared to implement the IPPC Directive.
- 4.12 Energy recovery and efficiency in the use of energy are being encouraged under Integrated Pollution Control licensing in some areas at present, e.g. anaerobic treatment of brewery and sugar effluents and assessment of Combined Heat and Power (CHP). Licensing of local authority waste facilities also has a high potential in this regard, as does anaerobic digestion of agricultural wastes. While these are not contributing large reductions of greenhouse gases at present, they send the right message. Anaerobic treatment of sludges, slurries and other organics would probably need regional/subregional digestors.

Transport

- 4.13 A distinction must be made between the use of the car in cities and in rural areas, and also between essential and non-essential car usage. Blanket increases in fuel taxes are not appropriate as the sole (or primary) response in this regard; other pricing mechanisms are needed to take account of different situations and requirements. Attention must also be given to the provision of alternatives; major investment in

fuel-efficient public transport, both in urban and rural areas, is essential. To this end, we recommend that a higher proportion of transport investment should be allocated to public transport, including railways. Integration of transport and planning systems is also important; this includes, *inter alia*, measures such as providing public transport services to serve new housing developments as soon as they are occupied, and supporting the location of industry and employment opportunities near to where people live. Again, this is important for rural areas.

4.14 The Strategy should address ways of tackling demand management without resorting exclusively to taxation. There needs to be a fundamental revisiting of transportation goals, with an emphasis on a sustainable transport policy, which takes account of issues including greenhouse gas abatement, land use planning, and provision and design of road infrastructure. More imaginative measures are also required in relation to motor fuel switching, for example by promoting greater use of the existing liquid petroleum gas (LPG) infrastructure, and promoting compressed natural gas (CNG). Consideration should also be given to practical support measures to encourage commuters to switch from car to bicycle or walking, and to promote car pooling. Education and awareness measures will also be needed to address car dependency. However, we would be concerned that the impact of such a range of measures on changing consumer behaviour is unclear.

4.15 Freight vehicles accounted for 11% of all registered vehicles in 1998. We note that a breakdown between private vehicle and freight vehicle contribution to greenhouse gas emissions is to be provided. *Comhar* proposes that specific abatement strategies for each of these two subsectors of the transport sector, including proposals for modal shift from road to rail, will be required.

Agriculture and Forestry

4.16 In assessing income effects for farmers, the Strategy should refer to the central position of cattle production enterprises in Irish agriculture. The Strategy should expand on “building on existing support mechanisms” to help offset the impact on farm incomes of the key agriculture measure of reducing stock numbers. It should be

recognised that agricultural policy is normally agreed for a number of years into the future at EU and national level. The Strategy should propose that discussions commence as soon as possible on the integration of its proposed measures into agricultural income support measures and REPS.

4.17 De-stocking measures required to reduce emissions from agriculture should be linked with:

- measures to improve the sustainability of agricultural systems, including the promotion of organic farming; and
- measures to provide support for viable alternative enterprises to supplement farm income and as alternative employment opportunities within the rural environment. In particular, the position of low-income farm households needs to be protected.

4.18 Based on experience of the technology and economics of animal waste treatment, both in Ireland and elsewhere, *Comhar* questions the reliance in the Strategy on animal waste treatment without financial support, either on an individual or community basis.

4.19 In relation to forestry, for which an important “carbon sink” role is defined in the Strategy, we note that the effectiveness of forestry as a carbon sink in the longer term may now be questioned. (A report on sinks is expected shortly from the United Nations Inter-Governmental Panel on Climate Change.) We would also wish to ensure that the full environmental implications of forestry are considered. In developing support for forestry as an alternative on-farm enterprise, account should be taken of the potential adverse impacts of over-planting of Sitka spruce (e.g. negative impacts on water courses if not properly planted and managed, impacts on biodiversity and landscapes). Broadleaf planting can provide an alternative to obviate many of these potentially adverse impacts. The implications for rural development and the sustainability of rural communities (e.g. increased land prices making it more difficult to enlarge smallholdings, social isolation impacts) must also be taken into account. We recognise that the proposed National Forestry Standard and revised Environmental Guidelines being prepared by the Department of the Marine and

Natural Resources provide a mechanism for the complementary assessment of the implications of climate change and other environmental constraints on forestry.

- 4.20 These considerations should also be integrated in the promotion of, and support for, commercial forestry. We recognise that research is developing on the relative contribution of different forestry practices, including short rotation plantation, to carbon sequestration, and recommend that this be taken into account both in the Strategy and by the Department of the Marine and Natural Resources in relation to sustainable forestry policy.
- 4.21 Incentives should be offered to support the growing of trees for use as fuel, instead of coal, turf or oil. The conservation and proper maintenance of hedgerows should also be supported for their contribution to a permanent carbon sink.

Built Environment

- 4.22 Since the Strategy recognises the fundamental importance of spatial planning and land use policies in promoting efficiency in the use of energy, transport and natural resources, it is important that:
- specific short, medium and long-term targets be set in this area;
 - existing policies, especially in relation to the provision of new housing, be reviewed in order to prevent the present and immediately forthcoming development of dormitory and satellite settlements without a concurrent provision of employment opportunities and such services as public transport, shops, and schools;
 - in addition to a major input into properly insulating the existing building stock, minimum standards of insulation for new houses, apartments and commercial buildings should be improved;
 - there is potential to support a major shift to more sustainable building technologies within the housing programme, such as active and passive solar measures, energy-efficient heating and heat-recovery systems, and high standards of insulation;

- specific measures should be outlined to show how the strategies in relation to integrated energy planning can be implemented in practice;
- the section on appliance efficiency should be supplemented by the addition of water utilisation in both domestic and public buildings.

4.23 Opportunities may exist to reduce greenhouse gas emissions whilst simultaneously tackling poverty and poor housing conditions. Measures to proactively address and eliminate fuel poverty should be incorporated into the Strategy with targets and timetables.

5. Implementation and monitoring

5.1 In general, we feel that the implementation proposals are weak, and need to be strengthened. This may be the result of the Strategy being largely set out as a framework document, with the intention of working out detailed proposals at a later stage. However, it is important that sufficient detail is given of the action which is to be taken. Where it is not possible to give exact details at this stage, there should be a clear commitment to drawing up specific proposals at the earliest possible date, in consultation with the relevant sectors and actors.

5.2 It is important that the correct implementation and monitoring procedures, including the introduction of indicators, are put in place to ensure an effective implementation of the Strategy. The responsibility for implementation will be a matter for Government, with each Minister responsible for integrating the agreed sectoral responses into the policy areas under his/her aegis. The monitoring procedures, by reference to appropriate indicators, will need to be robust and comprehensive. In addition to those measures identified in the draft Strategy, the role of the Environmental Protection Agency should be developed, particularly with regard to work already being carried out in respect of the development of environmental indicators and the State of the Environment baseline reports.

- 5.3 The use of voluntary or negotiated agreements must be accompanied by rigorous, independent monitoring and enforcement. Where targets are not reached within agreed timeframes, such agreements should be rescinded.
- 5.4 The role suggested for Local Authorities in the Strategy is crucial and will require the appropriate allocation of resources. Their active involvement in the process is essential, especially with regard to the delivery of services such as waste strategies, housing, infrastructural development, and in relation to land use and transport planning. We see a need to develop and support greater integration between these various functions within local authorities, and also for improved co-ordination between individual authorities. The role of the Regional Authorities in this regard will be important, and may be enhanced by the regional planning guidelines as proposed in the Planning and Development Bill, 1999 (on which *Comhar* has already commented).
- 5.5 Attention must also be given to involving and motivating local communities, with appropriate measures to encourage the development of community based initiatives and enhance their effectiveness. Local Agenda 21 can be a useful tool in this regard, particularly in bringing together the local authorities and their communities, and should be further developed and supported.

6. Communicating the message of the Strategy

- 6.1 The first task is to gain acceptance of the Strategy. This is most likely to be achieved if:
- the full implications of the different scenarios are clearly spelt out, i.e. the consequences of a “do nothing” approach or an approach which fails to reach the target set (limitation of the growth in greenhouse gas emissions to 13% above 1990 levels), compared with the consequences – positive and negative – associated with the Strategy; and

- the measures are fully integrated, so that losses arising from forced changes of practice – in agriculture, industry, etc. – are fully matched by other incentives, support for development of alternative production technologies, product substitution, etc., and by gains in the tax regime.

- 6.2 In general the public is unaware of the threat posed by climate change, and therefore a major information campaign will be needed. However, while information is essential, most people will not act on this alone. Therefore, a range of incentives/disincentives to influence behaviour in the different areas will also be required.
- 6.3 The Government should lead by example. The Strategy contains a great number of individual actions, which collectively amount to an enormous change in the way things are done – for example, through green procurement, environmental and energy auditing, reduction of free parking, incentives to use public transport, waste reduction and recycling. If sectors and citizens are to accept huge change, there needs to be a corresponding change in State operation.
- 6.4 There also needs to be a major investment in education. Every pupil at school should be exposed to arguments in favour of controlling emissions of greenhouse gases. Appropriate disciplines at third level should incorporate the arguments when possible. The sustainable development agenda should be integrated into textbooks and curricula across all relevant school and third-level subjects/courses.
- 6.5 Individual behavioural change will be the key to implementation. Every avenue should be used to get this message across, including national media, schools (building on initiatives already taking place), etc. Emphasis should be placed on changing peoples' perceptions of different options. Where there are changes in taxes, there should be proper public information drives to explain why these are necessary.
- 6.6 It is of the utmost importance before developing a communications strategy to identify a core message, which is simple, direct, easily communicated and which avoids areas of controversy. Ideally, it should encourage practices which would

represent good citizenship as well as being a positive contribution to the Strategy. There might be an overall/umbrella message, together with a number of individual messages advocating good practice or changes in behaviour on the part of individuals, households or groups of workers. The slogans at the heart of any campaign should be short, easily understood, witty, if possible, and easy to remember.

6.7 We believe that it would be best to open a communications campaign by focusing on ideas which would win the general approval of all parties. At a later stage, consideration could be given to whether – and to what extent – the controversial or disputed aspects of policy might be the subject of another phase of the campaign. Presuming that a core message or messages is agreed, it should be considered how these should be widely communicated.

6.8 *Comhar* suggests that the most significant part of the communications strategy, which should be implemented as soon as possible, is that the message be represented in a 15 second television film which would become part of the lead-in and the conclusion of each weather forecast on all television services. Currently, there are two 7.5 second sequences, noting the forecast's sponsor and otherwise being merely visually clever/pleasing, and punctuating the sequencing of news, advertisements, closing headlines, etc. A powerful campaign could be developed to sell an educational message about the Strategy, and the role of each citizen, and the sponsors of the weather forecast and/or the television stations should be invited to use these films as part of a public education campaign. Because the weather forecast is so important, commands such attention, and is relevant to climate change, it is ideally suited to such a campaign. Weather forecasters should themselves be regularly briefed on the Strategy so that where appropriate they might make an occasional informed aside in the course of a broadcast.

6.9 The development of a national multi-media campaign should be considered, using broadcast and print media, posters, etc. Special consideration should be given to winning the co-operation of major players in the semi-state sector, in local

government and public utilities, to encourage them to provide free advertising for this campaign which is manifestly in the public interest.

- 6.10 In addition to a strategy to communicate with the general public, individual campaigns would need to be aimed at farmers, industry, etc., focused on changing behaviour/practice to contribute to the overall National Strategy. Other campaigns of a more general nature should be developed to better inform key communicators such as teachers, journalists, broadcasters, editors, public representatives and those representing particular excluded and marginalised groups (such as the disabled and those living in rural isolation) about Ireland's obligations and intentions in this area. Funding and support should be given to various actors (e.g. farmers' organisations, environmental NGOs, community groups) to foster awareness of, and discussion about, climate change and emission reductions. *Comhar* will prepare a further paper in this regard, with more detailed suggestions for a communications strategy.

7. Areas where further work needs to be done

- 7.1 *Comhar* strongly reinforces the need for greater action on research and development (R&D) to support the Strategy. Significant investment is needed in many sectors and areas to provide Ireland-specific data to inform the debate and support the Strategy proposals. At present, there is a serious shortfall in R&D in Ireland in areas which would support implementation of the Greenhouse Gas Abatement Strategy, and would identify opportunities which could be used for the benefit of Ireland. For example, the recent International Energy Agency report on Ireland identifies the lack of R&D in relation to energy, both in the public and private sectors, as a serious weakness in Ireland's energy policy. Last year's "Technology Foresight" report similarly highlighted the weakness in Irish R&D generally, and recommended that this be rectified. We also recommend that this area needs to be addressed, particularly in the context of supporting the wide-ranging proposals in the Strategy.

- 7.2 More work also needs to be done on life cycle analysis to enable rational decision-making with regard to alternative options. For example, the method of electricity generation will help to determine whether electrified transport systems are in fact more sustainable than other options. Such analysis is also critical in determining sustainable materials management options.
- 7.3 There exists now a growing and important science on the means of introducing change into societies, where this change is mostly related to new technologies. There is considerable research on this in other countries, but Ireland-specific research is required on how to agree technological change in society.

Conclusion

In conclusion, *Comhar* welcomes the commitment to adopt a broad-based national strategy in recognition of the critical need to address the serious problem of climate change. We repeat that both the seriousness of the problem, and the need for early and concerted action, must be clearly outlined in the Strategy. We support the intention to spread the burden equitably across all sectors of the Irish economy and society. We recommend that Government ensures that the necessary administrative structures are put in place to support and drive the Strategy, and that appropriate resources are allocated to disseminate and implement the Strategy.